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PUBLIC HEALTH IN INDIA

CEDRIC DOVER

London.

The organisation of Public Health in India is discussed in detail by Graham[1], and brief reviews will be found in several publications, of which that of Pillay[2] may be mentioned. Cherry[3] reviews public health conditions and administration in Burma, while Souza and Tampi discuss progress in the United Provinces and in Travancore State respectively.[4] In this review it will suffice to say that the financial administration of public health activities is under a Minister of the Central Legislature, who holds the triple portfolios of Education, Health and Lands. The working head is the Director-General of the Indian Medical Service who, with the assistance of a Deputy-Director and the Public Health Commissioner with the Government of India, is practically or theoretically concerned with every activity relating to public health, both in its internal and international aspects. The diagram on page 152 taken from the latest annual report of the Public Health Commissioner, illustrates these relationships.

This diagram may give the impression that the care and improvement of public health in India is an organised activity, even if the branches threaten to overwhelm the tree. But this is not so. The causes are complex, various values (dependent on variations in political mentality and vested interests) being imputed to their relative importance. For example, it is felt in many quarters that the present system accords to the Indian Medical Service (fundamentally a military unit) privileges amounting to a monopoly opposed to the development of indigenous talent and the best interests of the country; the protagonists of the Service, actuated as much by an obvious urge as by a genuine pride in the outstanding traditions of the department, claim that alteration of the position will lead to the deterioration of public health. The critical onlooker, however, realises that such views require to be tempered by both sides.

One of the forces militating against a centralised and coordinated public health organisation is the spirit of provincialism stimulated by recent political developments. While Western countries are moving, slowly perhaps, towards the international outlook, India is still in the kindergarten of nationalism by provincialism. It is, therefore, repeated, *ad nauseam* that India is almost a continent, in which each of the provinces is a country requiring separate organisations for every phase of its development. But even a continent is susceptible to the economy of a binding influence, and the writer shares the Public Health Commissioner's hope that the new constitution will "contain such provision for the well ordered public health progress of India *as a whole* as will enable India in time to take her rightful place in health matters amid the other great nations of the world." The activities of provincial health departments are already unrelated, dependant too much on the ideas and interests of the directors and ministers concerned. Such a situation is always a disadvantage, and India would do well to benefit by the experience of other countries. In England, for example, the policy of local decentralisation has impeded the progress of public welfare and involved much unnecessary expenditure. Criticising the public health organisation in England, Sir Lynden Macassey writes[5]: " Few of experience will deny that in the cumbrous functioning of this vast heterogeneous and uncoordinated machinery of public health there is a tremendous waste of national energy and effort and a prodigal waste of the national income, meaning by 'waste' the achievement of results which could equally well be attained by immensely reduced expenditure and effort combined with failures to achieve the best result."

The responsibility for these provincial departments is vested in a Minister, who is responsible to the Governor and Legislative Council of the Province for its proper administration. The duties, largely advisory and executive, of each department are controlled by a Director, who has under him an administrative and technical staff working on a functional or territorial basis. Research officers may also find a place on the staff as, for example, in Bengal. A Sanitary Engineering Department and a Sanitary Board co-operate in measures for the improvement of public health. In municipal areas the municipalities, of which the larger employ a special Health Officer, are responsible for sanitation, while in rural areas the local District Boards assume the same responsibility, which is invariably no more than the bare minimum required for the restriction of abnormal spread of disease. These District Boards are advised by the Civil Surgeon of the district, and he is in charge, theoretically at any rate, of its sanitation and health.

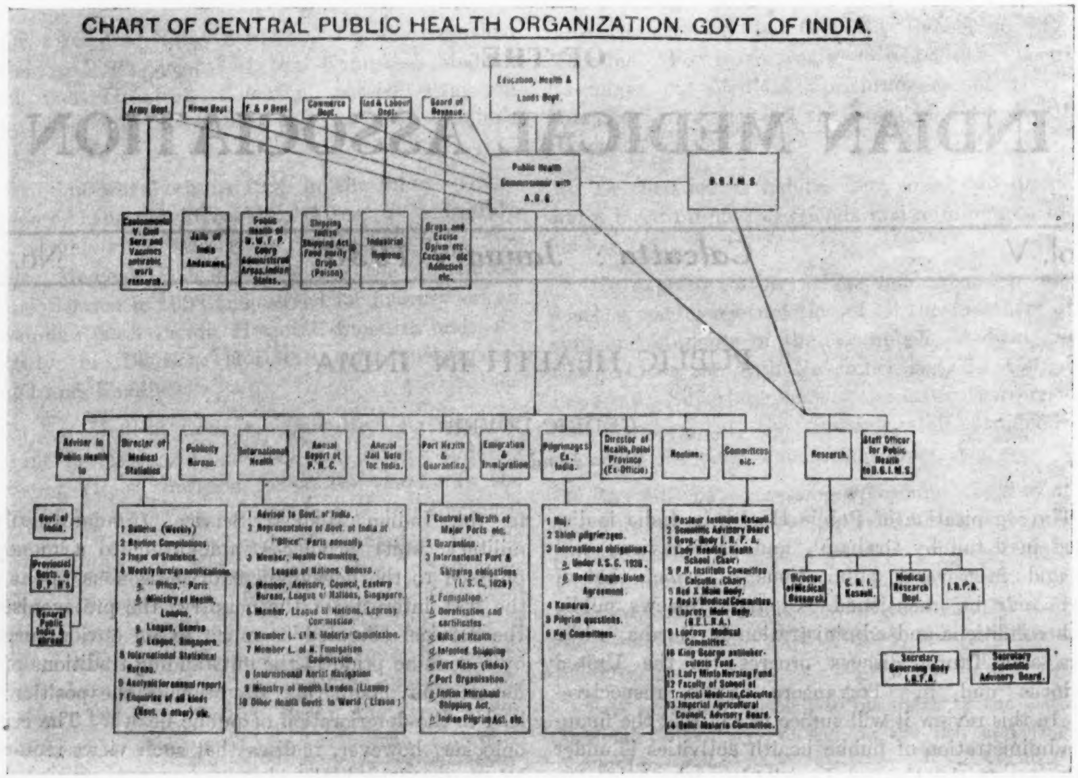


CHART OF CENTRAL PUBLIC HEALTH ORGANIZATION. GOVT. OF INDIA.
Education, Health & Lands Dept.
Army Dept
Home Dept
F. & P Dept
Commerce Dept.
Ind & Labour Dept.
Board of Revenue.
Public Health Commissioner with A.D.G.
D.G.I.M.S.
Economic V. Govt Sera and Vaccines antirabic work research.
Jails of India Andamans.
Public Health of N.W.F.P. Corry Administered Areas, Indian States.
Shipping Indian Shipping Act Food purity Drugs (Poison)
Industrial Hygiene
Drugs and Excise Opium etc. Cocaine etc Addiction etc.
Adviser in Public Health to
Govt. of India.
Provincial Govts. & D.P.H's
General Public India & Abroad
Director of Medical Statistics
1 Bulletin (Weekly)
2 Routine Compilations.
3 Issue of Statistics.
4 Weekly foreign notifications.
a. "Office," Paris
b. Ministry of Health, London.
c. League, Geneva
d. League, Singapore.
5 International Statistical Bureau.
6 Analysis for annual report.
7 Enquiries of all kinds (Govt. & other) etc.
Publicity Bureau.
International Health
1 Adviser to Govt. of India.
2 Representative of Govt. of India at "Office" Paris annually
3 Member, Health Committee, League of Nations, Geneva.
4 Member, Advisory, Council, Eastern Bureau, League of Nations, Singapore.
5 Member, League of Nations, Leprosy Commission.
6 Member L. of N. Malaria Commission.
7 Member L. of N. Fumigation Commission.
8 International Aerial Navigation
9 Ministry of Health London (Liason)
10 Other Health Govts. in World (Liason)
Annual Report of P. H. C.
Annual Jail Note for India.
Port Health & Quarantine.
1 Control of Health of Major Ports etc.
2 Quarantine.
3 International Port & Shipping obligations (I. S. C. 1926)
a. Fumigation
b. Deratisation and certificates.
c. Bills of Health
d. Infected Shipping
e. Port Rules (India)
f. Port Organisation.
g. Indian Merchant Shipping Act.
h. Indian Pilgrim Act. etc.
Emigration & Immigration
Pilgrimages Ex. India.
1 Haj.
2 Shiah pilgrimages.
3 International obligations.
a. Under I.S.C. 1926.
b. Under Anglo-Dutch Agreement.
4 Kamaran.
5 Pilgrim questions.
6 Haj Committees.
Director of Health, Delhi Province (Ex-Officio)
Routine.
Committees etc.
1 Pasteur Institute Kasauli.
2 Scientific Advisory Board
3 Govg. Body I. R. F. A.
4 Lady Reading Health School (Chair)
5 P.H. Institute Committee Calcutta (Chair)
6 Red X Main Body.
7 Red X Medical Committee.
8 Leprosy Main Body. (B.E.L.R.A.)
9 Leprosy Medical Committee.
10 King George antituberculosis Fund.
11 Lady Minto Nursing Fund
12 Faculty of School of Tropical Medicine, Calcutta.
13 Imperial Agricultural Council, Advisory Board.
14 Delhi Malaria Committee.
Research.
Staff Officer for Public Health to D.G.I.M.S.
Director of Medical Research
C. R. I. Kasauli.
Medical Research Dept.
I.R.F.A.
Secretary Governing Body I.R.F.A.
Secretary Scientific Advisory Board.

Chart of Central Public Health Organisation of the Government of India.

(*After Major-General J. D. Graham.*)

The Collector, who is to the district what the Governor is to the province, may also inaugurate measures which he feels to be required. It follows that progress, where there is progress, is determined essentially by the intelligence and enthusiasm of local officials and organisations. It is also evident that public health organisation in India cannot be likened to a series of steps connecting the Himalayan heights of the authorities in direct contact with the Government of India with the local bodies, whose vision is bound by the areas administered by them. In fact, the skeleton central organisation is obviously unable even to get into focus the confusion of sheep in the folds below.

This organisation is directly supported by officially aided and private societies, the most important being the Indian Red Cross Society (with which is incorporated the Lady Chelmsford All-India League for Maternity and Child Welfare), the St. John's Ambulance Association (Indian Council), the British Empire Leprosy Relief Association (Indian Council), the Countess of Dufferin Fund (with which is incorporated the Women's Medical Service), Lady Minto's Indian Nursing Association, the All-India Service of the Y. M. C. A., the All-India Blind Relief Association, the Poona Seva Sadan (or Sisters of Service), and numerous other associations, missions and committees, working in a small way, with little or no official aid, for the prevention of disease and the amelioration of social conditions. Their number is so large that it suggests the compilation of a readily available list, accompanied by a critical survey, with suggestions for coordination and amalgamation wherever possible This is a desideratum that might well occupy the attention of the Public Health Commissioner.

A creche in the Empress Mills, Nagpur.

(*Courtesy of Sir Sorabji Mehta.*)

Progressive business concerns are also making solid contributions to public welfare, though ill-health is still a feature of Indian labour.[6] Russell's and Power's reviews[7] and the report of the Labour Commission (1931), indicate that several employers of labour are keenly alive, not only to their responsibilities, but also to the fact that money spent on the welfare of their employees is money well spent. It is almost invidious to select examples, but the welfare work of the Empress Mills at Nagpur, which is rivalled by that of such organisations as the Buckingham and Carnatic Mills of Madras, may be instanced. The activities of the Empress Mills involve every aspect of the life of their employees and their families. Their educational interests, apart from grants to external schools catering for their employees, commence with a nursery and kindergarten, and pass on to the provision of primary schools, industrial classes for boys over twelve years of age, factory schools for half-time workers, and various devices, such as night-schools and lectures for the improvement of adult education. Even music classes find a place in the scheme. The health, economic position, and civic sense of the workers in these mills are also supported by adequate medical aid, maternity benefits, crèches, co-operative stores and credit societies, housing loans (there is a splendid model village), refreshment shops, libraries, athletics, scouting organisations, amusements and kindred activities.

Even more extensive are the activities of pioneering industries like those of the Burma Corporation at Namtu, and the Tata Iron and Steel Company at Jamshedpur. The latter Company employs a special Welfare Officer (Mr. K. A. D. Naoroji) and staff for the supervision and coordination of their numerous welfare activities. This Company has spent millions of rupees on improving the life of its employees (as stray examples, 10 millions on housing, 0.8 million on the provision of a free ice and soda plant alone, 0.5 million on bazar improvements), and rightly regards with pride the conversion, within three decades, of a dense jungle into a town, laid out on garden city lines, of a hundred thousand inhabitants, living under conditions that they could not even have imagined in the villages from which most of them come.

Two experiments of the Company are of particular interest. One is the hexagonal system of house planning for the lower classes of labourers; the other an ingenious device for improving housing conditions without inconvenience. As Mr. Naoroji describes it, "a superstructure is built round the hut requiring repairs, and after a new roof is thatched and the mud or brick walls built, the house inside is pulled down, the occupant thus having a larger and better ventilated house than he had before." It is on the spirit behind such activities that the progress of India depends.

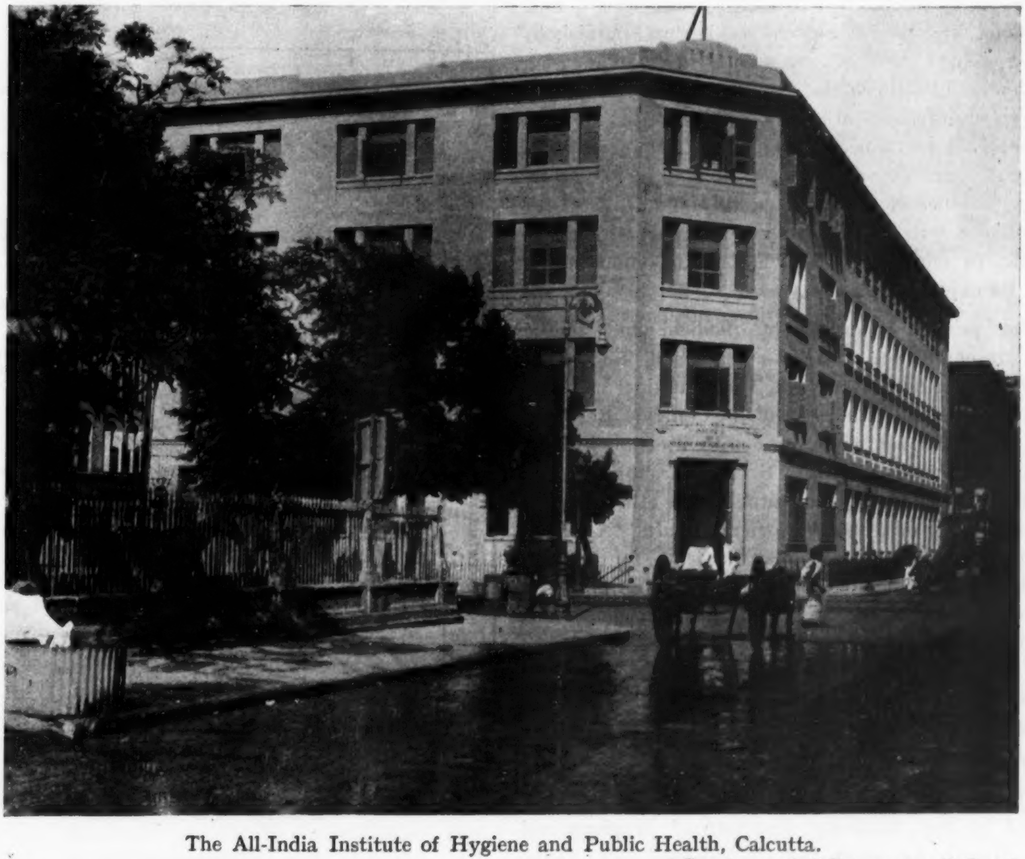
Returning to the official organisation for public health, the general apathy towards the subject is shown by the fact that in the symposium on India issued by the London "Times" (1930), and in that edited by Bhandakar,[8] the question of public health finds no place, though the "Times" includes a eulogy of the Indian Medical Service. The outlook of Government on the health of the country is shown by the budgets allotted to it, the per capita expenditure per annum being about three annas. In 1928—29, only 0.03 of the total expenditure of the central and provincial governments was allotted to medical and public health activities, while an equal amount was spent on superannuation allowances and pensions and 0.26 on military services. In 1929, municipalities in British India spent 26.2 per cent. of an income of 180 millions of rupees on public health.

The position is aggravated by the fact that the microscopic amount spent on public health cannot be regarded as being spent with a proper regard for economy. There is, for example, the question of salaries. In certain quarters it is felt that the salaries and allowances paid to European officers are excessive, and that Indian workers of equal merit could be employed on much less, if certain appointments were not the virtual monopoly of the Indian Medical Service. This is an argument that is better avoided here, but it may be said that under the existing social system a good worker is worth a good salary whatever his nationality, and Indians do themselves no good by emphasizing their cheapness. Moreover, nationalist opinion on such matters must be impartially critical and supported by evidence of worth, if it is to be really effective.

The question of salary ratios is, however, deserving of consideration. At present, the head of a research department frequently draws between twenty and thirty times (and even as much as sixty times) the salary of juniors engaged on research. In England, on the other hand, the salary ratio of assistant and departmental head is at most 1:6. Impartial opinion does not ask that the salaries of those at the top of the scale should be reduced, but it does demand that juniors, from whom research work is expected, be paid the salary that such work is worth. Many a good man has been broken on the wheel of the present system, which offers no prospects of earning more than a bare subsistence wage at any time. For, a worker who has barely enough to live on is unable to improve himself, to seek liberalising contacts, to bring to his work that originality of mind, that capacity for visualizing and critical thinking, which good research demands. Efficiency and economy require the institution of a system of appointment by merit and of advancement, without limitations and prejudices, on the same basis. On appointment, the essential minima that encourage the utilisation of available opportunities is also necessary. This fact has been recognised even by official enquirers (see, for example, the recent Indian Forestry Committee's report), but nothing has yet been done, though the scientific progress of the country is in no small measure dependent on such considerations. At present, the intelligent junior is forced inevitably into a slough of despond, in which the humour incidental to the supposed or actual limitations of his superiors provides the only consolation.

In the circumstances, we must be surprised, not at the inadequacy of welfare research and propaganda, but at the excellence of the work that has been done. This is due, as Major-General Graham suggests, to the 'individuality and drive' of a few officers, and not, we may add, to the efficiency of the system. Members of the Indian Medical Service have undeniably produced the bulk of medico-hygienic research, encouraged during the last twenty years by the Indian Research Fund Association. Of this Association it has been said that it can claim to be " amongst the pioneers in organised medical research on a large scale and has been referred to by other countries in very complimentary language. Still better, it has been copied by several other nations."

The official organ of this body is the *Indian Journal of Medical Research*, supplemented by the *Indian Medical Research Memoirs*. These publications provide for a steady stream of papers, both of



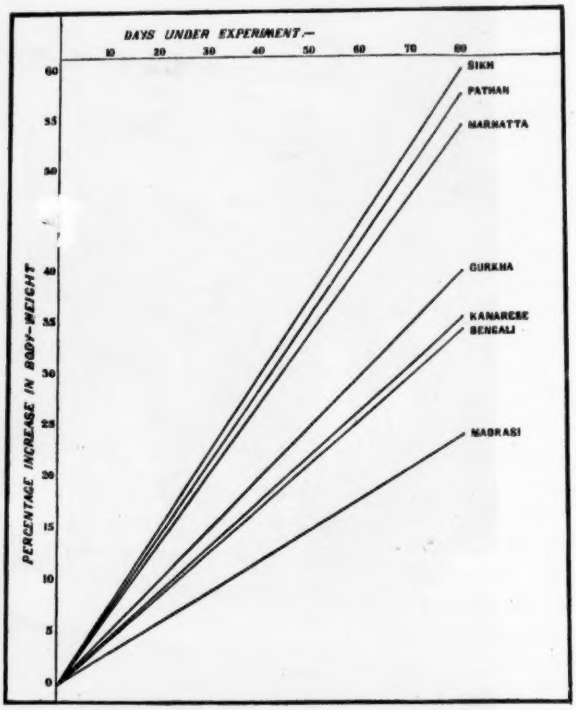
The All-India Institute of Hygiene and Public Health, Calcutta.
(*Courtesy of* " STATESMAN," LTD.)

the basic and more practical types, on various studies of medical and eugenic interest. The influence of the Indian Research Fund Association on this output is shown by the fact that, in the financial year 1929—30, it financed forty-eight investigations on various aspects of malaria, plague, cholera, kala-azar, leprosy, helminthology, anti-rabic vaccines, tuberculosis, maternal mortality, nutrition and other subjects. A review of these enquiries is obviously impossible here; the reports of the Public Health Commissioner provide annual summaries of research achievements.

It may be added that, the members of the independent medical and allied professions are now being encouraged to take a larger part in research and education than they have done in the past. The Indian Medical Association "has been organised to protect (1) the interest of every medical practitioner in India, (2) the interest of national health, and (3) the interest of medical education and research throughout the country." It arranges conferences and exhibitions, the proceedings of which are published, and has issued several interesting pamphlets. Its journal already follows the publications of the Indian Research Fund Association, and the *Indian Medical Gazette*, in importance, and with further cooperation, the encouragement of research and social endeavour, the maintenance of a high standard of published work and fearless but liberal criticism, supplemented by constructive effort, the Association will undoubtedly secure its objects.

The principal centres of medical and public health research are the now renowned School of Tropical Medicine at Calcutta, the Haffkine Institute at Bombay, and the so-called Central Research Institute at Kasauli, made famous by its contributions (particularly those of Sir S. R. Christophers) to malariology, though also concerned with other investigations, chiefly of a bacteriological nature. A recent attempt to establish a Central Institute for Medical Research proved abortive, largely because the proposed location at Dehra Dun (more than a thousand miles from the chief centres of research), where the early home of the Forest Department was to be converted into the necessary laboratories, was so obviously absurd that it raised a storm of protest throughout the country.

The nucleus of a central research organisation is afforded by the All-India Institute of Hygiene and Public Health, for which India is indebted more to the munificence of the Rockefeller Foundation (which donated $648,000) than to the vision of the government of the country, or the philanthropy of its leading citizens. The building, astonishingly modern for research institutes in India, was completed in 1931 on a plot adjacent to the School of Tropical Medicine, with which the new Institute harmonises in design and is expected to harmonise in research. The Government of India has undertaken to maintain the Institute with an annual grant of about Rs. 350,000, but it has been dogged by that constant Indian spectre officially described as 'financial stringency.' Yet, if the so-called Indian Women's University at Poona could attract an endowment of £100,000, surely the country is not so blind to public spirit that intelligent stimulation would not meet with response (particularly with the examples of philanthropy already before them) from those princes of industry who periodically offer advice on the scientific basis of progress. An endowment of £100,000, invested at minimum



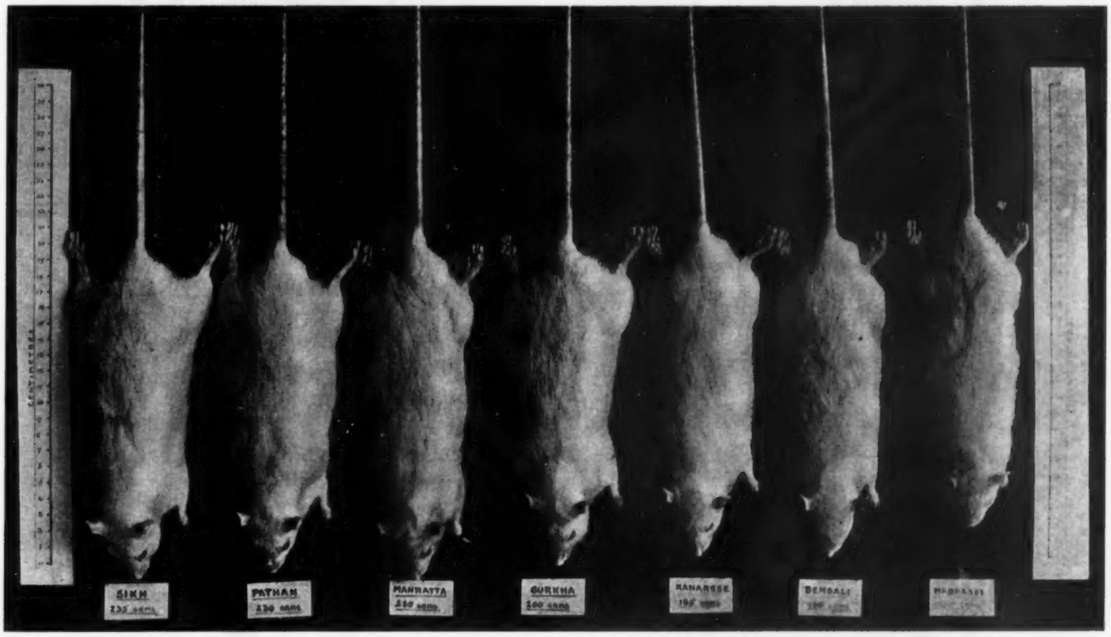
Graphical representation of the relative values of the national diets of India.

(*Courtesy of Col. R. McCarrison.*)

interest, would provide five to ten research workers remunerated on a scale that would attract quality.

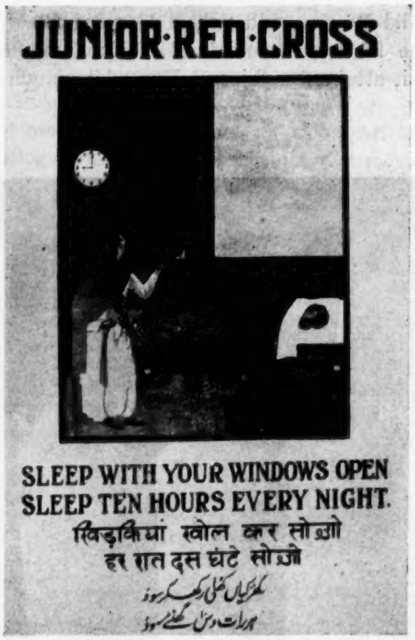
"The primary object of the Institute," writes the Director[9] "is to bridge over the gulf between the results achieved by pure research and their practical application to the community............ The Institute will be coordinated with the various aspects of practical hygiene and public health all over India, and, it is hoped, will be able to render assistance to public health administrators and workers, and institute enquiries and investigations of a practical nature in the application of medical research and knowledge for the betterment of the Indian people." To achieve this object, six sections, each with a Professor, Assistant Professor and assistants, deal respectively with (1) Public Health Administration, (2) Sanitary Engineering, (3) Vital Statistics and Epidemiology, (4) Biochemistry and Nutrition, (5) Malariology and Rural Hygiene, and (6) Maternity and Child Welfare and School Hygiene.

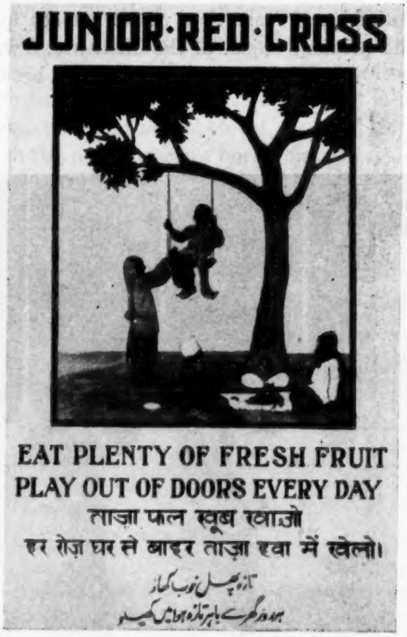
The Institute would fulfil a fundamental function if it attains its object. For, while much medical research in India is of outstanding value, and our knowledge of disease and welfare requirements provides a basis for educational activities and practical reforms, the available statistics do not suggest any marked improvement in the welfare of the people. For example, malaria continues to claim over a million deaths per annum, in spite of a literature of almost colossal proportions, while Col. R. McCarrison's outstanding studies on nutrition remain to make an impression on the unique incidence of malnutrition in the country. Research alone will not secure the public welfare of India, without radical measures for the prevention of disease and the improvement of physical and cultural standards. And periodic health

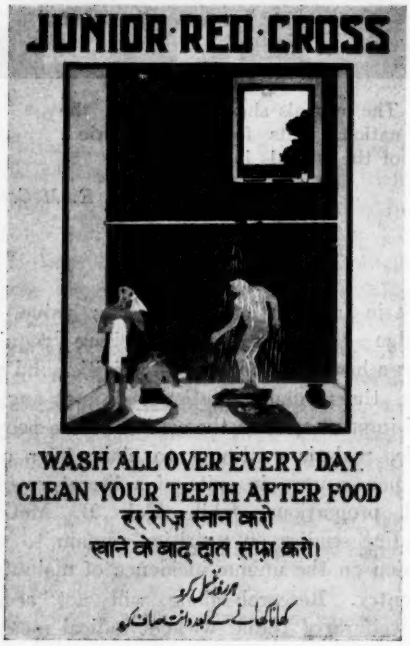


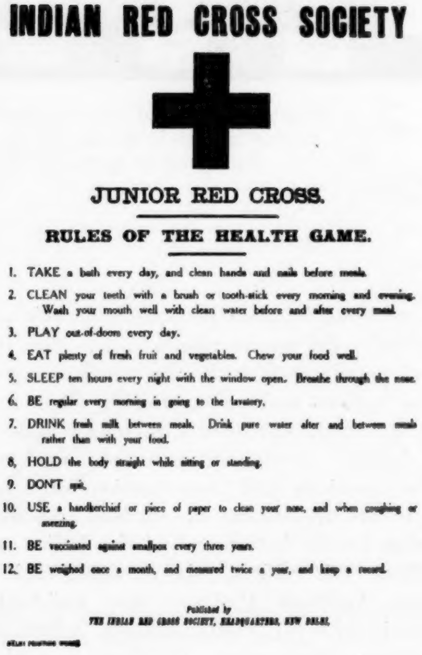
Relative values of the national diet of India. The animals shown represent the average growth in groups of rats fed on various national diets for a given period. The figures in grms. are the average weights of the animals in each group.

(*Courtesy of Col. R. McCarrison.*)


JUNIOR·RED·CROSS
SLEEP WITH YOUR WINDOWS OPEN
SLEEP TEN HOURS EVERY NIGHT.
खिड़कियां खोल कर सोओ
हर रात दस घंटे सोओ
کھڑکیاں کھلی رکھ کر سوؤ
ہر رات دس گھنٹے سوؤ


JUNIOR·RED·CROSS
EAT PLENTY OF FRESH FRUIT
PLAY OUT OF DOORS EVERY DAY
ताज़ा फल खूब खाओ
हर रोज़ घर से बाहर ताज़ा हवा में खेलो।
تازہ پھل خوب کھاؤ
ہر روز گھر سے باہر تازہ ہوا میں کھیلو


JUNIOR·RED·CROSS
WASH ALL OVER EVERY DAY.
CLEAN YOUR TEETH AFTER FOOD
हर रोज़ स्नान करो
खाने के बाद दांत सफ़ा करो।
ہر روز غسل کرو
کھانا کھانے کے بعد دانت صاف کرو



INDIAN RED CROSS SOCIETY

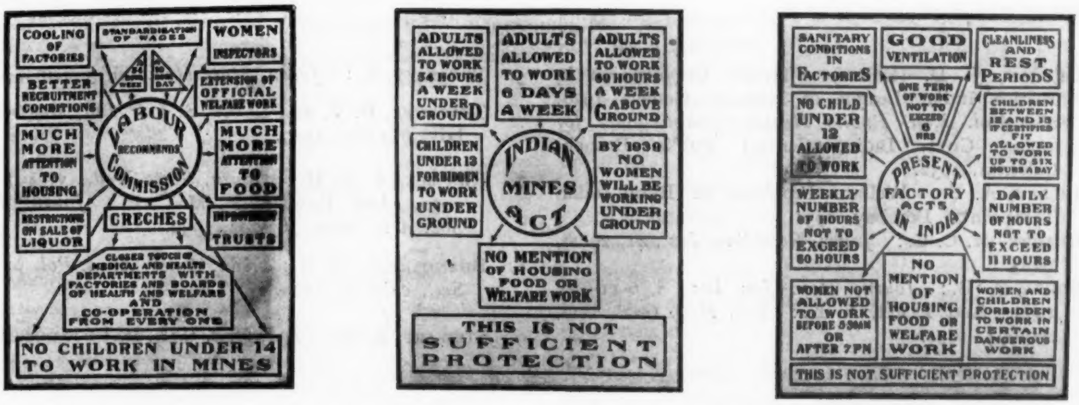
JUNIOR RED CROSS.

RULES OF THE HEALTH GAME.

1. TAKE a bath every day, and clean hands and nails before meals.
2. CLEAN your teeth with a brush or tooth-stick every morning and evening. Wash your mouth well with clean water before and after every meal.
3. PLAY out-of-doors every day.
4. EAT plenty of fresh fruit and vegetables. Chew your food well.
5. SLEEP ten hours every night with the window open. Breathe through the nose.
6. BE regular every morning in going to the lavatory.
7. DRINK fresh milk between meals. Drink pure water after and between meals rather than with your food.
8. HOLD the body straight while sitting or standing.
9. DON'T spit.
10. USE a handkerchief or piece of paper to clean your nose, and when coughing or sneezing.
11. BE vaccinated against smallpox every three years.
12. BE weighed once a month, and measured twice a year, and keep a record.

Published by
THE INDIAN RED CROSS SOCIETY, HEADQUARTERS, NEW DELHI.

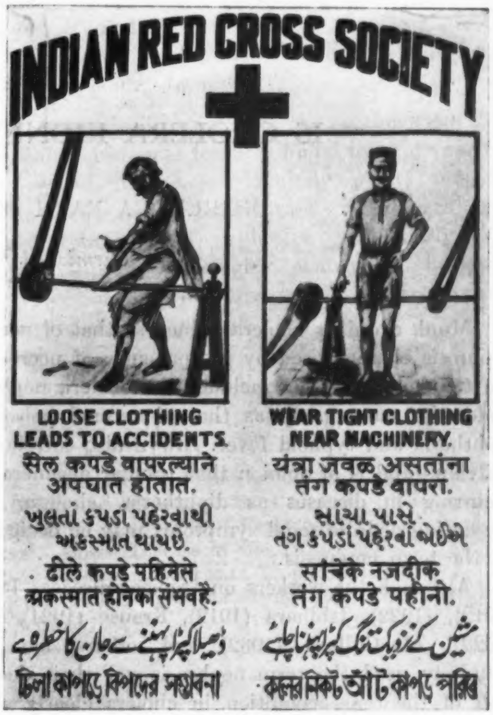
Some posters issued by the Junior Red Cross.


COOLING OF FACTORIES
STANDARDISATION OF WAGES
WOMEN INSPECTORS
BETTER RECRUITMENT CONDITIONS
EXTENSION OF OFFICIAL WELFARE WORK
LABOUR COMMISSION RECOMMENDS
MUCH MORE ATTENTION TO HOUSING
MUCH MORE ATTENTION TO FOOD
RESTRICTIONS ON SALE OF LIQUOR
CRECHES
TRUSTS
CLOSER TOUCH OF MEDICAL AND HEALTH DEPARTMENTS WITH FACTORIES AND BOARDS OF HEALTH AND WELFARE AND CO-OPERATION FROM EVERY ONE
NO CHILDREN UNDER 14 TO WORK IN MINES
ADULTS ALLOWED TO WORK 54 HOURS A WEEK UNDER GROUND
ADULTS ALLOWED TO WORK 6 DAYS A WEEK
ADULTS ALLOWED TO WORK 60 HOURS A WEEK ABOVE GROUND
INDIAN MINES ACT
CHILDREN UNDER 13 FORBIDDEN TO WORK UNDER GROUND
BY 1939 NO WOMEN WILL BE WORKING UNDER GROUND
NO MENTION OF HOUSING FOOD OR WELFARE WORK
THIS IS NOT SUFFICIENT PROTECTION
SANITARY CONDITIONS IN FACTORIES
GOOD VENTILATION
CLEANLINESS AND REST PERIODS
ONE TERM OF WORK NOT TO EXCEED 6 HRS
NO CHILD UNDER 12 ALLOWED TO WORK
CHILDREN BETWEEN 12 AND 15 IF CERTIFIED FIT ALLOWED TO WORK UP TO SIX HOURS A DAY
PRESENT FACTORY ACTS IN INDIA
WEEKLY NUMBER OF HOURS NOT TO EXCEED 60 HOURS
DAILY NUMBER OF HOURS NOT TO EXCEED 11 HOURS
WOMEN NOT ALLOWED TO WORK BEFORE 5.30AM OR AFTER 7PM
NO MENTION OF HOUSING FOOD OR WELFARE WORK
WOMEN AND CHILDREN FORBIDDEN TO WORK IN CERTAIN DANGEROUS WORK
THIS IS NOT SUFFICIENT PROTECTION

Photographs of posters concerning industrial legislation issued by the All-India Institute of Hygiene and Public Health. (*Courtesy of Lt.-Col. A. D. Stewart.*)

exhibitions, baby weeks, lectures and conferences, supported by some poster publicity, travelling exhibitions, cinema films, pamphlets and leaflets, combined with missionary exhortations, such philanthropic effort as exists, and the present provision for the treatment and prevention of disease, can scarcely be regarded as radical measures, or even as extensive soporifics.

Radical measures, however, cannot be operative under an organisation in which the parts are often greater than the whole. Centralisation is the first essential. The Statutory Commission was rightly convinced "that the improvement of public health in India .... might be materially promoted if there were a wider central organisation ...... whose business it would be to encourage and coordinate the work that is so much needed in these directions." The Public Health Commissioner, whose reports always indicate a refreshingly liberal outlook, strikes the same note, and really responsible opinion favours an immediate scheme for centralisation. It should be emphasized, however, that such a scheme must be the result of a cooperative capacity to see the whole problem of public welfare in perspective, and that it must be put into operation without concessions to conflicting sentiments, or rehashing by civilian administrators.


INDIAN RED CROSS SOCIETY
LOOSE CLOTHING LEADS TO ACCIDENTS.
WEAR TIGHT CLOTHING NEAR MACHINERY.
सैल कपडे वापरल्याने अपघात होतात.
यंत्रा जवळ असतांना तंग कपडे वापरा.
ખુલતાં કપડાં પહેરવાથી અકસ્માત થાય છે.
સાંચા પાસે તંગ કપડાં પહેરવાં જોઈએ
ढीले कपडे पहिनेसे अकस्मात होनेका संभव है.
साचेके नजदीक तंग कपडे पहीनो.
ڈھیلا کپڑا پہننے سے جان کا خطرہ ہے
مشین کے نزدیک تنگ کپڑا پہننا چاہیے
ঢিলা কাপড় বিপদের সম্ভাবনা
কলের নিকট আঁট কাপড় পরিব

A workman's protection poster issued by the Red Cross Society.

Note.—This review formed part of a memoir on eugenic problems in India presented to the Third International Congress of Eugenics, New York, 1932. Other parts which may be read in connection with this article are:—Eugenic Legislation in India—*Quarterly Review,* January, 1935; Maternal and Child Welfare in India—*Mother and Child,* January, 1935; The Centralisation of Welfare Work in India—*Ind. Med. Gaz.* (in press); Population Control in India—*Eugenics Review* (in press); Sex education and allied problems in India—*New Era* (in press).

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IS CHOLERA KIDNEY A FORM OF NEPHROSIS ?

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Munk classifies cholera kidney as that of necrotic nephrosis characterised by the presence of necrosis of the tubular cells. He included the cholera nephrosis under the same group as that of veronal poisoning, diphtheria and typhoid fever. Elwyn also corroborates his views and is of opinion that tubular degenerations occurring in diseases as diphtheria, cholera, etc., presenting definite renal symptoms may be designated by the term nephrosis.

Although the workers on tropical diseases Rogers (1912), (1922), Ishihara (1912), Krause (1924), Fuji (1928), MacCullum (1932) and others have not definitely used the term nephrosis yet their description of the renal condition in cholera clearly shows that they actually mean what is generally meant by the term nephrosis.

The term nephrosis, originally used by Mueller in 1905 and subsequently by Volhard and Fahr in 1914, although not a very happy term, is generally applied to the condition which is characterised pathologically by necrosis of the cells of the tubules but without any change in the glomerulus and clinically by a chronic course, oliguria, œdema, albuminuria, without renal insufficiency, without hypertension and cardiac hypertrophy. In conjunction with the absence of renal insufficiency there is no retention of waste products of protein metabolism. The non-protein nitrogen, urea, uric acid and creatinin are present in blood in normal amounts and so true uræmia does not occur in nephrosis. The convulsions and headache which have occasionally been observed by Volhard have been attributed to have been due to œdema of the brain. Œdema of the intestinal tract is responsible for diarrhœa, vomiting, etc., which are of frequent occurrence. The other condition found in nephrosis is the diminution of total protein of the blood with a diminution of albumen while the globulin remain normal or increased either relatively or absolutely.

Keeping these considerations in mind when one studies the cholera kidney it is found that it is very hard to label the condition as nephrosis.

In contradistinction to the above elements making up the nephrotic condition, cholera shows quite different findings which can be tabulated as follows:—

	Nephrosis	Cholera
Change in the tubules	Yes	Yes
Change in the glomeruli	No	Yes
Course	Chronic	Acute
Oliguria	Yes	Very marked
Œdema	Early & constant, persisting until death.	Always absent
Albuminuria	Present	Present
Hypertension and Cardiac hypertrophy	No	No
Retention of nitrogenous waste products	No	Very marked
Uræmia	No	Very marked

From this it follows that cholera shows some features which are quite distinct from those of nephrosis particularly in the following:—

1. Changes in the glomeruli which are mainly those of thickening of the glomerular basement membrane with proliferation of both the epithelial and endothelial cells of the tuft. Hyaline changes of focal necrosis are conspicuous. Thickening of the capsular basement membrane with sclerotic glomerular atrophy is fairly common, while that is invariably present in all cases dying of cholera. Accumulation of exudation products in the glomerular space is common.

2. Course of the disease—unlike nephrosis, cholera is characterised by a very acute course lasting only for a few days.

3. Œdema—unlike nephrosis, cholera never shows any presence of œdema either during the period of activity of the disease, or during convalescence or after. The only form of œdema found is the pulmonary œdema.

4. Retention of nitrogenous waste products—this is well marked. It is not uncommon to find a figure of 225 mgm. of N. P. N. per 100 c.c. of blood, with 112 mgm. of urea, 35 mgm. of uric acid, 6 mgm. of creatinin.

5. Uræmia.—This is often very pronounced. The usual symptoms, restlessness, congested eyes, delirium, dry coated tongue, partial or complete unconsciousness, bleeding from lips, nose and gums, incoherency, hiccough, deep laboured breathing, dyspnœa, tympanitis and burning sensation all over the body are fairly common even in cases of anuria of 16 to 20 hours' duration.

A comparison, thus, of the pathological, biochemical and clinical features found in nephrosis with those found in cholera definitely points out that cholera presents gross features which are quite distinct from those of nephrosis, particularly in the following aspects—histological changes in the glomeruli, retention of the nitrogenous waste products, course, œdema and uræmia.

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GONORRHŒAL VULVO-VAGINITIS AMONGST CHILDREN

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Vulvo-vaginal inflammation has not been given by the medical profession, public health authorities, legislators and social workers, as much attention as it deserves.

Howard A. Kelly blamed the medical practitioner for his lack of interest in the treatment of the disease.

Taussig was perhaps more right in remarking that the prevalence of gonorrhœa in the little girls is a result of ignorance of the fundamental laws of hygiene. He strongly blamed the Public Health authorities, whose duty it is to educate the general population in hygienic methods and to enforce measures as may ultimately reduce the incidence of the disease. We can certainly say of gonococcal vaginitis in children that one ounce of prevention is worth many pounds of cure.

Seiple estimated in the first decade of this century, when the discharges in little girls were not so often submitted to laboratory examinations, the number of cases appearing in Chicago annually at 500. Pollock figured the yearly infections in Baltimore at from 800 to 1000 girls.

We believe the number of cases in our cities is more than what they have been imagined. The general impression is that such cases are few and far between. Nothing could be far from the truth.

We had the opportunity of dealing with vulvo-vaginitis in little girls first early in the year 1934. We were lucky in examining vaginal smears from about ten cases. All were positive. 2 cases came from very well-to-do families. The rest were from the middle class.

During the course of the current year we have received materials for investigation from the Hindu Ladies' Hospital, Amritsar, and other sources. Out of the 15 cases that we examined 14 gave positive results whilst 1 showed some other infection. That case was probably a chronic one and might have shown gonococci if we could do cultural test. Cultural tests could not be performed except in two in this series of cases due to the objection to taking the pathological material by the investigator himself without which accuracy could not be ensured.

Lately, we examined the spreads of a girl aged six years. A few days later we had the spreads of her younger sister three years old. Both gave positive result.

The Superintendent, Hindu Ladies' Hospital, states that, in all, 88 cases attended her out-patients' department during the 9 months of the current year (all cases below 14 years that complained of vaginal discharges are included). Out of the 88 cases 3 only were suspected to be due to thread worm infection. 12 cases only were sent for microscopic examination. All were positive. She is of the opinion that all cases under eight years are gonococcal. (Because they were all resistant to treatment and had the same constitutional symptoms in acute stage as were complained of by those whose spreads had given definitely positive results. These cases were amenable to the same form of treatment as for definitely gonococcal cases).

The ages of the 25 patients, that we had the opportunity to examine during the course of the current and the last year, varied from a week to 7 years. Most cases were between 4 to 7 years. It is a fallacy to believe that the disease is found only among the poor.

We attempted to ascertain the sources of infection in these cases, with the following results:—

First case.—The parents were definitely harbouring Neisserian infection and were probably responsible for the infection in the child.

Second and third cases.—Here the parents were free from infection. The servants refused to be examined. Refusal on their part was a presumptive evidence of their being infected. We also had the opportunity to examine 4 cases among domestic servants in some of the well-to-do families. They all had gonococcal infection. So we are led to believe that servants who are responsible for the bringing up of the children in some families might sometimes be conveying gonococcal infection to their charges.

There is an old superstition, popular with the Latin races of Europe, that if a person affected with gonorrhœa contracts intercourse with a child of the opposite sex he or she will be cured of the disease. In 1912 Seiple in America examined 53 girls most of whom had been the victims to this belief. (Cases are on record in which little boys were thus inoculated by women. The desired end in these cases is the cure of gonorrhœa and not the pleasure of coitus. The superstition which has been responsible for cases in the West probably has a hold on the minds of the orientals also. It may be responsible for some of the cases here).

I could not definitely trace cases to this superstition except of 2 boys, both about 8 years old, who came up with profuse discharges that were positive under the microscope. The boys gave histories of being involved in coitus by young women presumably for this very purpose. In one case the woman was legally sued.

Another case that came to our notice was of a Pathan who was challaned by the police for bestiality with a young female ass. The Pathan admitted that he did it with the idea of curing himself of gonorrhœa which he definitely had.

Fourth and fifth cases.—As already mentioned, a sister conveyed the infection to the younger sister. It was a child to child infection. The parents were free from it.

The rest of the 20 cases most of whom belong to the middle class or poor families could not be investigated further. The parents in these cases were rather suspicious of our investigation and denied any knowledge of infection in them. There were no opportunities of our taking spreads from them, but we have grave doubts about their statements.

Trentwith in 1906, stated that he had been able to show the father indirectly responsible for 50—75 per cent. of his cases of vulvo-vaginitis of little girls. We believe that here too, the parents rank first in conveying infection to their children. Next come the servants and the last but not the least is the child to child infection.

The hand of the mother or the nurse has occasion to touch the genitalia of the infants many times during the day but has been exonerated of responsibility by Taussig and Rachford. The latter points out that adult female nurses while attending to these cases never become infected themselves. We, however, believe that the mother or the nurse may be very often responsible for the transference of infection from one child to the other or from their own persons; but they themselves do not get infected from the children.

Both peritonitis and vulvo-vaginitis are most common at the ages from 4 to 7 years. The incidence of peritonitis may be less than that of the vulvo-vaginitis, because the infection in the former case has to fight its way through the defence posts of the external os, internal os and the tubes. It is believed that peritonitis is common at this age because the epithelial separation of the walls of the vagina is complete by then. And it is partly attributed to the secretion of the vagina which is alkaline up to the 7th year except in the newborn infants and a few months after birth. In the newborn the secretion is acid probably because of the presence of glycogen in the vaginal epithelium which is also many layered at this age. The PH varies in the newborn from 5.7—5.4. It is probably due to the acid reaction of the vaginal secretion in the newborn that we do not very often see vulvo-vaginitis in them. In the series of cases that I have recorded there was only one case wherein infection was present after birth. Vulvo-vaginitis in this case was associated with ophthalmia neonatorum.

The patency, the alkaline secretion and the delicate stratified epithelial lining of the vagina, most strongly favour the infection at this age. At a later age the acid secretion and the cornification of the epithelium act as a strong barrier against infection. No less predisposing factor is the open formation of the genitalia at this age so that the adult female may not contract the disease from the infected children but the infection from their persons or from those of other children may be conveyed by their hands and the seedlings take root into the soil which is probably very fertile.

Damp towels and wash cloths may be responsible for conveying the infection. But how far the contact of the infected hands or persons with dry linen, (as is done by the infected launderers or launderesses), can be a source of infection, we doubt very much, when we keep in view the delicate nature of the organisms.

In the West, lavatories have been much incriminated. The lavatories here cannot be the cause because we use "U" shaped seats with low bowls, on which do not "sit" as the Europeans do, thus avoiding contact of the genitalia with the edges of the commodes.

TREATMENT

Prophylaxis. In view of the high incidence of the disease, prophylactic measures, to suit the local conditions, should be adopted. They are as follows:—

(*a*) The instillation of a drop of 2 per cent. silver nitrate solution in the vestibulum vaginæ of all new-born girls whose mothers show evidence of gonorrhœa.

(*b*) Instruction to parents of infected children by the medical practitioner or the health visitor regarding preventive methods to limit the infection. These measures should include the use of separate towels and wash cloths, sleeping in separate beds and thorough cleansing of contaminated clothing.

(*c*) Investigation by the health visitors as to the probable origin of the infection in each case with a view to protecting the other children in the same house. Notification of the disease in this country is out of consideration, so long as the local bodies do not make provisions for the treatment; moreover it is yet a disputed question even in the West.

(*d*) The adoption of "U" shaped seats with low bowls for urinals in houses making use of high commodes.

(*e*) In the well-to-do houses the female children may be sent away during the time the case is not gonococcus-free for about three months.

(*f*) Trained nurses may be employed for treatment in rich families rather than entrusting the treatment to the mothers.

(*g*) The infected children should not be allowed to attend school and mix with other female children.

(*h*) So far the little children have been day scholars only in our country. But now educational institutions imparting education on Western lines are coming into prominence. During the last decade a few have developed everywhere. They are becoming fairly popular with the people. The time is not very far off when all these institutions will be converted into boarding schools for the little children of both sexes, so that we are then likely to notice epidemics of vulvo-vaginitis in such institutions. Even now the female children do collect together in the day schools but there are less chances of coming in contact with the persons of one another during school hours than in homes or boarding houses. So, it is high time for the public health authorities to enjoin upon such institutions at this very stage to develop a genuine system of medical inspection. Every female infant or girl should be examined on admission for vulvo-vaginal discharge. If there is any discharge spreads should be taken. If the spreads are positive, the child should be treated till the spreads are negative and only then admitted into the society of other girls.

(*i*) Last but not the least important measure to stamp out the disease is to adopt measures to reduce the incidence of the venereal diseases as a whole. Well-equipped centres for the treatment of venereal diseases as a whole and of the vulvo-vaginitis in particular, are badly needed.

In England and Wales there are 186 treatment centres; 87 laboratories for examination of specimens, sent either by practitioners or by centres of treatment, 13 hostels for housing young girls suffering from venereal diseases, and 1 house for cases of vulvo-vaginitis. It is a pity that there is not a single up-to-date centre in the Province where the medical practitioners can send the spreads of their cases for examination or the cases for treatment.

The only centre worth the name is in the Mayo Hospital, Lahore, but there too, the arrangements are not adequate for purposes of the practitioners. It is high time for the Municipal authorities to open centres for treatment, and good laboratories wherein free examinations for diagnostic purposes can be made.

Curative Treatment. The following routine treatment has been adopted for the cases in the out-patients' department of the Hindu Ladies' Hospital, Amritsar.

General:—In the acute stage the child is kept in bed with care as to the general medical supervision of the case, regulation of the diet and bowels, etc. In the sub-acute stage the child is put on tonic treatment.

Local:—The cases are divided into two classes for this purpose:

(*a*) With obvious infection of the vagina, *i.e.*, where there is discharge in the vagina.

(*b*) Infection of the vulva only.

Treatment for the bladder symptoms:

In patients who complain of some symptoms in the urethra or bladder, the bladder is washed out with normal saline before treating the vagina and then 0.2 to 0.5% of mercurochrome solution is run in (percentage according to the age of the patients). It is then drained out after a few minutes. Then the vagina is treated.

Treatment of the Vagina.

1st week. Every patient is first douched with normal saline. A very fine rubber catheter is used. It is attached to a funnel or the nozzle of an irrigator through which the normal saline can be passed. One should be careful to do it under low pressure, otherwise there is danger of carrying the infection higher up into the cervix. After this, 1 per cent. mercurochrome is run in through the funnel. The patient is allowed to lie on the table for 15 minutes after it, so that mercurochrome may have time to act. The child is then allowed to go away. If there is much excoriation of the surrounding and vulvar skin then zinc ointment is applied and it is covered with starch boric powder. This procedure is carried out daily.

2nd week. In the 2nd week mercurochrome is stopped and 0.5 per cent. picric acid solution is used instead. This is used every other day after douching. Either this or 2 per cent. mercurochrome may be used. In nervous children 1% silver nitrate may be run into the vagina but this is not adopted as a routine.

During the second week symptoms gradually subside, the congestion and œdema of the vulva lessen and the discharge becomes less and less purulent.

3rd week. 2% mercurochrome after douche is used twice a week.

4th week. Treatment is continued as in the 3rd week.

Most of the patients stop treatment after the 4th or the 5th week.

Vaccine Treatment:—It has been used in some cases but it does not in any way shorten the period of the routine treatment. In two cases which showed arthritis as well, it certainly proved very beneficial. Spreads were taken from some cases two months after stopping treatment. They were found to be negative.

Hormone treatment:—Recently Edger Allen employed ovarian hormone with a view to cause cornification and increase in thickness of the delicate stratified epithelial lining of the vagina. The idea came up to him from the fact that the infection subsides when the changes of puberty have converted the delicate thin-layered epithelium lining the child's vagina to the thicker structure of the adult.

Ovarian hormone was administered to immature monkeys. There was the expected change in their epithelial lining of the vagina.

The treatment with ovarian hormone was then carried out in some children suffering from severe vaginal infection with purulent discharge that showed Gram-negative diplococci morphologically resembling gonococci.

In the majority of the patients the ovarian hormone caused a proliferation of the vaginal epithelium. The discharge rapidly cleared up and the mucosa was free from gonococci.

There was one objection against the treatment of the disease by the ovarian hormone, as to whether there was any danger in exhibiting this to children.

Hartman proved from his experiments on immature monkeys that the administration of the ovarian hormone will not develop the endometrium beyond the mid-interval stage. Hartman opines that there can be no permanent damage to the ovary though there may be a temporary inhibition of growth change in the follicles of the ovary because the dose given to the human beings is much less than the doses required to result in uterine bleeding in animals. Moreover, it is so quickly excreted by the kidneys that no cumulative action is produced and hence it is not in any way unsafe to put the children with gonococcal vaginitis on treatment with the ovarian hormone.

We may not be able to use it as a routine in the out-patients' departments but it can certainly be tried in those cases that resist ordinary treatment.

In conclusion, we desire to acknowledge our gratitude to Drs. Misses Sushila Uttam Singh and H. K. Paul, for their help. But for their lending us so many cases from their hospital (Hindu Ladies' Hospital, Amritsar), for investigation, we would not have been able to complete these observations.

CEREBRO-SPINAL FEVER, 1935

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Total number of cases 411.

Number of cases admitted month by month was:—

January ...	4	May ...	75
February ...	33	June ...	35
March ...	104	July ...	20
April ...	124	August ...	11
September ...	5		

No case occurred after September 22 till now. Epidemic was at its height during March, April and May and then began to subside gradually.

Age Incidence:

Cases between 1 and 5 years of age 29 about 7%.
Cases between 6 and 12 years of age 61 about 15%.
Cases between 13 and 35 years of age 270 above 65%.
Cases between 36 and 55 years of age 51 above 13%.

The majority of cases was between 13 to 35 years of age, cases from 35 to 45 years of age coming next. Babies below 2 years of age and old persons above 55 years were least in number.

Sex: Out of 411 cases, 317 were males and 94 females. Males were more affected than females proportionately about 4 to 1. (Adults and children in same proportion. There was marked predominance among young adult males).

Community; Cases were not confined to any single community though Hindus were much more affected than any other community in the city (4 to 1). Hindus 316, Mahamedans 90, Christians 5.

Occupation and Status in Life: Cases were mostly from amongst the poorer classes. Mill coolies and labourers were the greatest in number, then came the middle class, only two cases occurred amongst the upper middle class. (Mill coolies and labourers 176, middle class 40, shop-keepers 51, students 47, tailors 3, cooks 2, constables 5, upper middle class 2, washermen 5, sweepers 4, orphans 23, agriculturists 3, beggar 1, private services 35.

Spread of the disease and the areas affected: The first case admitted on the 12th January, 1935 was from Gumny Mohal; the next case was from the police lines on 17 January and then on 31st January the third and fourth cases were imported from the Meerut district and then from the first week of February the disease spread to different parts in the city assuming an epidemic form later on. There was not a single instance in which two cases occurred in the same family. The cases who had to exert much in the outdoor without taking adequate rest suffered more than those who confined themselves to their houses. The open dusty atmosphere and over-exertion did play an important role. Students mostly got the disease on the eve of their examination. The cases came from different localities and were not confined to any single locality but people living in the most crowded parts of the city suffered most. The most affected parts were Hulagung, Cooli Bazar, Parade, Goaltoli, Parmat, Colonelganj, Collectorganj, Subzimandi, Unverganj, Sisamee, Bansmandi, Talaomahal, Gumnimahal, Bengalimahal, Rotigudam, New Road, Moolganj, Ranjitpurwa, Chamanganj, Afimkoti, Raipurwa, Patkapur, Ram Narain Bazar, Lalwali Gali, Nawabganj, and Khalasi Line.

Schools, Mills, and places of entertainment were not closed and there was no direct proof of infection from these places either.

Prophylaxis: No relative and none of the hospital staff attending the patients got infection. The only prophylaxis was that all were made to gargle their nose and throat twice a day with pot. permanganate solution. No mouth mask was used by the staff while attending on these patients. To the best of my knowledge the staff did not act as carriers of the disease.

Death Incidence: Out of 411 patients 130 died. The percentage of death is about 31.5 per cent.

Symptoms: Sudden onset with fever, intense intolerable headache, general malaise and bodily pains, repeated vomiting, dilated pupils, in most cases some rigidity of the neck, positive Kernig's sign with more or less insomnia and delirium. Fever was usually irregular, in some cases touching the normal while in others very high but generally it was about 101 to 102 degrees. Even when the temperature was not high the patient was often delirious.

Rigidity of the Neck:—The patient could not bend the head forward nor could he move the head from side to side easily. As the disease progressed retraction became more marked. In worse cases back was arched with concavity backwards and legs were kept flexed. Pains in the back extending down to the muscles of the lower extremity were often severely complained of. Insomnia and intense headache mostly referred to the occiput often drove the patient to a state of acute mania and the symptoms were very abrupt indeed. Obstinate constipation was mostly present. Pulse was often found irregular in rhythm and relatively low pulse rate in comparison with temperature.

Less common symptoms:—In some cases hyperæsthesia along the spine was present. Purpuric spots were visible in very few cases. Herpes labialis was seen in a dozen of cases. Inflammation of joint appeared in about one and a half dozen cases after a couple of days and joints were very painful but gradually subsided without suppuration. Generally knee joints, wrist joints, and shoulder joints were affected. Cranial nerve implications were pain in the ear, defective hearing and dimness of vision. Certain motor defects, such as retention of urine, aphasia, hemiplegia and flaccid paralysis, optic atrophy and neuritis were observed in a few cases only. Hydrocephalus developed in some cases. The most usual and grave complication observed in about six cases was the development of thyroiditis which happened during the convalescent period and nearly all cases died with the exception of one. Relapses occurred very commonly and often several times. Persistent pyrexia was very troublesome specially during convalescence. In the majority of cases the disease caused a marked wasting.

Differential Diagnosis:

1. Acute invasion stage of small pox and measles.
2. Influenza.
3. Typhoid fever.
4. Tetanus.
5. Tubercular meningitis.
6. Rheumatic fever when joint implication was the first manifestation.

Prognosis: This depended much on early diagnosis and early lumbar puncture. The more turbid and thick the cerebro-spinal fluid, the worse the result. The earlier the lumbar puncture was done from the onset of the disease and the serum given, the better the result. Patients over the age of 45 bore the disease very badly and generally died. Babies below the age of 2 years were also bad sufferers and death incidence was high.

Treatment: Lumbar puncture was performed in all cases for about 8 to 10 days, as a rule, once a day excepting invalid cases when it was done twice a day. It had been the most useful and harmless therapeutic measure and relieved intracranial pressure and associated symptoms, removed toxins and meningococci. Sometimes the diagnosis depended on the condition of C.S. fluid alone and L.P. was done to diagnose the disease. C.S. fluid was examined microscopically for meningococci in every case. 30 to 50 c.c. under pressure was the average amount drawn in an adult at each sitting and 20 to 40 c.c. of anti-meningococcus serum was injected intrathecally, *i.e.*, about 10 c.c. less than the amount of fluid withdrawn. Serum was also given at times both intravenously and intramuscularly. Polyvalent serums of both Bengal Chemical & Pharmaceutical Works, Ld. and Burroughs Welcome were used. Both gave equally satisfactory results. For anaphylaxis of serum, adrenalin chloride sol. hypodermically and calcium chloride 2 c.c. of 10% sol. intravenously were injected. Sedatives such as pot. bromide and chloral hydrate were generally required and morphia was repeatedly given in some cases. Urotropine gr. x along with soda salicylate gr. viii, pot. bicarb. gr. xii and pot. citras gr. x and aqua up to ℥i for a dose given thrice daily in all cases. Urotropine was also injected intravenously but its efficacy is doubtful. Later in the disease pot. iodide with pot. bicarb and ammon. chloride in a mixture was administered for a long time. To lessen pyrexia in the later stages of the disease iodine sol. 1 c.c. intravenously was found useful.

Full nourishing diet *e.g.* fresh fruit juices, glucose solutions, eggs, etc. were allowed. General nursing was very important.

SUMMARY

The epidemicity was in its highest pitch in March, April and May and then gradually was rising for many months and in September it seemed to have subsided. Out of the total number of cases admitted in the hospital about 60% were discharged as cured, 31% died and 9% of the cases left the hospital relieved or otherwise. The percentage of death rate was nearly equal in every month except January to the number of cases admitted. Males were more affected than females (about 4 to 1). There was marked preponderance among young adult males. Patients over 45 years bore the disease badly and generally died. Babies below the age of 2 years were bad sufferers and death incidence was high. But fortunately people over 45 years and babies and children below 5 years of age were least in number in the roll of this disease. Serums of both Bengal Chemical and Burroughs Welcome were used and both gave equally satisfactory results, the advantage with Bengal Chemical being its lower cost. The disease though dreadful is not infectious and contagious as it is believed to be.

SODIUM LACTATE IN THE PREVENTION AND TREATMENT OF CHOLERA ACIDOSIS

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The clinical picture of cholera, as is well known, is characterised by intense purging and vomiting. This leads to the production of a series of events which result in the excessive loss of bases in the motions, disturbance of water metabolism leading to the dehydration of the tissues, impaired circulation and starvation. The dehydration of the tissue itself is also the precipitating factor and favours development of acidosis. The starvation also produces ketosis and the impaired circulation with dehydration of tissue produces anuria, retention of waste products.

We need not discuss here the mechanism of production of acidosis in cholera and also the part played in its production by dehydration, effect of toxin with production of excess of acid, diarrhœa leading to excessive loss of base in the motions and various other factors.

That acidosis as occurs in cholera had been suspected by Sellards in 1910 and later corroborated by Rogers and Shorten and other workers. Further, the routine use of sodi bicarbonate in the hospital and private practice has definitely reduced mortality from the so-called cholera uræmia to a great extent. With the advent of improved technique the hydrogen ion concentration of the blood as well as CO_2 combining power of plasma show definite acidosis in a vast number of cases of cholera. In fact, even in straightforward cases of cholera the CO_2 combining power shows a figure of 18 to 27 volumes of CO_2 per 100 c.cm. of plasma.

In the prevention and treatment of acidosis in cholera sodi bicarb is our best armamentarium. It has repeatedly been proved by routine administration, in all cases, of one pint of normal saline with 160 grains of sodi. bicarb. followed by the required quantity of hypertonic saline that mortality from cholera uræmia has been reduced by 70%, and when alkali has been given intravenously at the very beginning of collapse the acidosis or what is known as post-choleraic uræmia has been prevented altogether.

Although sodi. bicarb. has been found to be very effective, yet it has its disadvantages. In order to be effective, sodi. bicarb. must be given in a fairly big dose, the dose generally used being 160 grains in one pint of normal saline. This dose is objected to by many on the ground that it leads to a sudden increase of the numerator of the bicarbonate—carbonic acid ratio. The mode of administration is generally the intravenous route. Although Ganguly used to give it subcutaneously still there are very few advocates if any, for this route as it causes much pain and thus adds to the shock. The method of sterilization is also to be considered. Personally we are of opinion that sodi. bicarb. need never be sterilised as no organism can grow in it on account of its great alkalinity, particularly for intravenous use. The usual practice is to sterilize it by adding to the boiled and then partly cooled saline. The high temperature at once leads to evolution of CO_2 converting the bicarbonate into carbonate.

All these difficulties can be rectified by using sodium lactate instead of sodi. bicarb. Hartmann first showed that sodi. lactate is completely metabolised in two hours with conversion of lactate ion into glucose, by liberating sodium ion practically quantitatively which combines with excess of carbonic acid to form a rapid supply of bicarbonates. This process occurs rapidly enough so that acidosis is soon overcome but not so rapidly that marked alkalosis occurs. The solution can be easily prepared and sterilised by boiling and is perfectly stable and can be kept over long periods. It is non-irritating for subcutaneous injections.

All these properties serve the purpose admirably in the prevention and treatment of acidosis in cholera. With a view to test this we have been treating cases of cholera with sodium lactate for the last three years with gratifying results.

The dose given is 10 c.c. of the molar solution of sodium-lactate per kilogram of the body weight. Some patients show reaction with high temperature while the majority had no untoward reaction. The CO_2 combining power of plasma before and after administration of sodium lactate had been estimated in a group of six cases. The result is as follows:

	CO_2 combining power of plasma before lactate	CO_2 combining power ½ hr. after 15 c.c. Molar Sodium lactate in ℥x of Normal Saline
Chirat	18.9 vols.	22.5
Suren	26.2 vols.	31.4
Md. Jehad	22.79 vols.	27.6
Haramohan	23.64 vols.	27.9
Sailen	27.36 vols.	29.8
Dharani	20.04 vols.	24.5

(Normal being 53—77 vol. of CO_2 per 100 c.c. plasma).

The result obtained is quite satisfactory. As all these cases were of average severity there was no mortality in this series.

CONCLUSION

In cholera the bicarbonate—carbonic acid ratio is altered to a considerable extent. Dehydration of the tissue along with excessive loss of base in the motions with effect of toxin resulting in the production of excess of acids are among the most important factors which favour the development of acidosis.

The bicarbonate—carbonic acid ratio can be restored to normal by two factors (1) by administration of sufficient quantity of fluids in order to overcome dehydration and to stimulate diuresis. This is the most important factor. The other factor is to use alkali of which sodi. bicarb. is the only drug used generally. Sodium lactate has been used by us instead of sodi. bicarb. which gives the same result as sodi. bicarb., at the same time many disadvantages of the use of sodi. bicarb. are eliminated by the use of sodium lactate. A routine use of sodium lactate in every case of cholera prevents to a considerable extent the occurrence of acidosis.

Our best thanks to the physicians in charge of the Infectious Hospital of the Carmichael Medical College for their kind permission to use sodium lactate on the patients in their wards.

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PUBLIC HEALTH PROBLEMS AND INDIAN UNIVERSITIES

It was a happy thought which led to the choice of Rao Bahadur T. S. Tirumurti of the Medical College in Vizagapatam to deliver the address at the recent convocation of the Andhra University. This is the youngest of the Indian universities and promises well if not starved of funds. The problem of education generally is one of vital importance to the country at all times and at the moment it is commanding wide attention. Much of the criticism is well known, but helpful suggestions are few. It is not often that a fresh light is brought to bear on the subject and Dr. Tirumurti is to be congratulated on the freshness of many of his remarks. He has hit upon one of the major deficiencies of our educational system. Perhaps as Professor of Pathology it is only natural that Dr. Tirumurti should look at things mainly from this point of view, but there will be no denying the fact that the deplorable conditions of sanitation indicate an urgent effort for the improvement of public health in India, an improvement which could largely be effected through the medium of schools and colleges. The study of sanitation, dietetics and biology would do a great deal towards forming a public health conscience among the people, leading them to an appreciation of preventive medicine which they lack at present. By this means both the physical and economic well-being of the people would be better served, for one is dependent on the other. How far behind we are in the matter of preventive medicine was well brought out by Dr. Tirumurti in the contrast he drew between conditions we find here and those found in other countries. For instance, Dr. Jameson's figures for England and Wales show that more than £26 millions is spent annually on medical services by local authorities and over £31 millions on environmental sanitation, including housing. That is a level of expenditure to which we have yet to aspire, while the paucity of funds in our various exchequers does not hold out much hope of our gaining these aspirations in any reasonable period of time. Yet we are a thousand times more in need of this expenditure and the services it represents. We have only to think of malaria or tuberculosis to realise how far what is being done is behind what requires to be done. Undoubtedly, an educated public conscience to the benefits of preventive medicine would insist on increased expenditure on the public services and itself facilitate the rendering of those services. There would undoubtedly be a quick step forward in public health matters in India, and to that end the educational facilities that schools and colleges can provide require to be encouraged and stimulated by every means available, governmental aid and public generosity. A chair for dietetics would, for instance, be of immense advantage when it is recognised that the science of nutrition is now playing an increasing part in the lives of people in other countries, who realise more and more that poor nutrition lowers vitality and leads to disease, and disease in turn to the poverty of the people. The League of Nations' Health Department has given very close attention to this aspect of the subject. The Government would do well to weigh the suggestions put forward by Dr. Tirumurti, since it has now long been demonstrated that a healthy environment is essential to prosperity. We agree fully that hygiene should form an integral part of the school curriculum and that biology should have the recognition it does in Europe and America where it is a compulsory subject even for school students, while in the sphere of public health there should be sustained effort in educating the public in such matters as sanitation and nutrition. These reforms cry out on every hand in India and it is to be hoped the reformed legislatures will be more amenable in meeting the growing demand for a forward policy in public health development. Some of the reforms indicated do not call for any excessive expenditure and would provide the basis for further advance. In any case the expenditure would be well worth while.

MEDICAL SCHOOLS OF INDIA

The improvement of training provided in the various medical schools in this country is a question that has frequently been brought to the attention of the public and authorities and it is one that has often exercised the mind of the Indian Medical Association. We, therefore, welcome the able notes written by the Director-General, Indian Medical Service and recently published by the Government of India. These notes sum up the position neatly and contain many useful suggestions.

There are altogether twenty-eight medical schools in India, under provincial or other local control and " No one," remarks the Director-General, " can have visited many of these schools without being struck by the difference in standard amongst them, by the variations in buildings, equipment and staff." An ingenious table conveniently records the main defects and common among these are over-crowding, ill-equipment and inefficient staffing. The over-crowding suggests the need for many more schools than exist at present but in view of the paucity of funds available to the various provincial governments for this purpose any increase in number is hardly feasible when the existing schools are suffering for want of funds. The two alternatives that confront us are (1) many schools in which the standard of training is not all that could be desired or (2) fewer schools of more efficient type. Certain provinces have tried the first one poling and then the other and there seems to be little agreement on the point, but whatever the poling of a province in this respect, it is hardly satisfactory that the training should show such wide divergences between one school and another and the schools of one province and another. This is very important particularly in view of the fact that there exists reciprocal recognition of these qualifications between the different provinces. As in the case of the university medical colleges there is need here for some system of uniformity, a minimum standard of training, and we are glad to find the Director-General advocating this step. He does not suggest the machinery but recommends in the first instance the calling of a conference of the authorities of the medical schools to discuss the questions. We feel sure a conference would be most helpful. So far as the machinery to ensure uniformity is concerned, it will be remembered that in the discussions on the Indian Medical Council Bill, the Indian Medical Association pressed strongly for the medical schools to be brought within the provisions of the bill so as to make the same principle applicable to them and even now we do not see any reason why the Indian Medical Act should not be amended to this end. It should be quite possible for the Indian Medical Council to undertake this function which is similar to that which they perform now in respect of the universities. We do not see the need for a new and separate central organisation, which would entail ertra expense in personnel and offices, where the existing organisation could well serve both purposes, perhaps more efficiently. It is, to our minds, a measure which has been too long delayed and it would certainly make for greater efficiency in the medical schools than exists at present.

CASE NOTE

CLINICAL NOTES OF A CASE OF SEPTICÆMIA DUE TO ACTINOMYCOTIC INFECTION

D. P. GHOSH, B.A., M.B.

The patient was a Hindu, male, aged 65 years.

Previous History:—He was an athlete in early life—of muscular build. Had always led an active, and mostly a strenuous life. For the last 8 years he became a diabetic. The sugar in urine used to come and go with dieting and medicinal treatment. He never agreed to take Insulin, although the sugar in the urine, sometimes, went up as high as 25 grains per ounce. Due to hard work coupled with irregularity there was failure of compensation of a dilated heart and so he had to lie down in bed for three months towards the end of last winter.

Present illness:—Shortly before this illness he went outside Calcutta to the Sundarbans which is not proverbially malarious. He used to take a daily plunge bath in a tank for the 10 days he stayed there. The rainfall this year was heavy and washings from the surrounding area used to drain in the tank. Within a week of his return to Calcutta he fell ill. The fever came with chill and rigor, accompanied with nausea and vomiting. It clinically resembled an attack of malaria but the blood was negative. The fever, however, yielded to quinine. The attack lasted for 6 days. After 3 weeks of this illness there was a second attack of fever with similar symptoms of nausea, vomiting, chill, and rigor with one additional trouble. He began to cough from the fourth or fifth day of his fever and two bronchopneumonic patches were soon found in both the lungs near about the lower angle of the scapula.

Previous to this second attack of fever for a few days, he used to take a daily bath in cold water in the chilly hours of early morning in an open terrace in the third storey in order to perform certain religious practices (*Tarpana*). His usual practice was to take a bath at 12 noon in water kept in the sun for a couple of hours to take away its chill. As the first attack of fever yielded to quinine, so quinine and its analogues were freely tried in different forms, *e.g.*, quinine mixture, and bihydrochlor. tablets Atebrin, Gamatoxan. They could not check the fever, so a second examination of blood was done specially as the cough became harassing by this time and the patches in the lungs had become well marked.

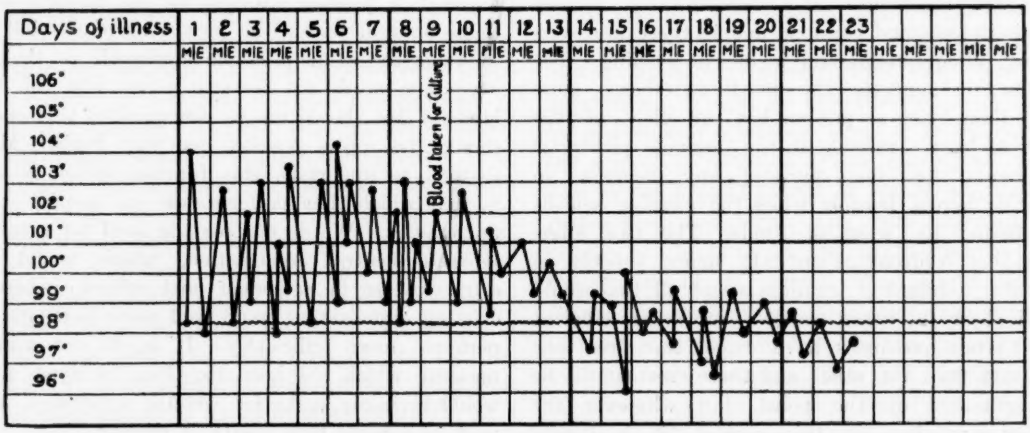
The blood picture at the time was as follows:—

Hb—55% (Sahli).

Total Count:

R. B. C.—3,35,000 per c.cm.

W. B. C.—14,240 per c.cm.



Temperature Chart of second attack of fever.

Differential Count:
Poly—80%.
Small Mono—5%.
Large Mono—13%.
Eosino—2%.

No malarial parasites were seen.

The antimalarial treatment was stopped and after treatment for 10 or 12 days the cough subsided, the expectoration ceased, the adventitious sounds in the patches of lungs disappeared but more marked signs of definite consolidation persisted. By this time the rigors became more and more marked and began coming twice a day with double rise of temperature. One day it came on thrice which raised the suspicion of some septicæmic form of infection and a blood culture was made by Dr. C. C. Basu. The blood culture on the fourth day showed a growth of an organism of the genus *actinomyces*. On the day previous to taking the blood for culture, an injection of 10 grains of quinine was given. Although in the beginning quinine and other antimalarial preparations were sufficiently tried without any effect, and it had to be suspended to treat the broncho-pneumonia, quinine grains 10 by injection, had some effect on the height of temperature. So one day after, i.e., on the day following that of taking the blood for culture, a second injection of quinine grs. 10 was given. This did not stop the fever altogether but brought the height of it still lower. Then the party changed the system of treatment, but the downward course of temperature continued and he was afebrile in 5 days from the second injection of quinine. He started a stomatitis, before the fever left him, and vomiting which had ceased came back again. A colicky pain started in the abdomen. Vomiting and colic prevented him from taking any nourishment or drink by mouth, and so rectal saline and glucose was started but not much could be given and he retained very little. The patient by this time through illness, low diet, malnutrition and lastly from starvation had become prostrated. A diarrhœa now set in, with passage of mucus and membranous shreds. He finally expired on the 23rd day of his second illness, fully conscious till his last breath, dying of malnutrition and exhaustion.

Moot points in this case:—

(1) Actinomycosis septicæmia is rare.

(2) Could the source of infection be from plunge bath in the tank, where washings drained from neighbouring area with rank vegetations? It is a usual practice to gargle while bathing and in a fit of coughing he might have aspirated some water contaminated with actinomyces into the lung.

(3) The broncho-pneumonic condition might have been due to an attack of influenza brought on by chill from an early morning cold bath on the terrace.

(4) Was the broncho-pneumonia primarily due to any two of the following or secondary to

(*a*) Actinomycotic infection.
(*b*) Tuberculosis.

The reason for the last suspicion is that he was a run down old man with chronic diabetes and had been exposing himself to T. B. infection by constantly visiting a T. B. hospital for the last four months as the hospital was started by his enterprise and exertion.

(5) What was the first attack of fever? Was it malaria because it yielded to quinine? Or was it an early attack of actinomycosis infection? If the latter, was amelioration due to quinine, and if so, why did it not yield to quinine later on as it did in the first instance? Yet two 10 grain injections of quinine with 2 c.c. each time of 1% solution of urea hydrochlor. had marked effect on the temperature. This raises the question if quinine has any effect on actinomycotic infection, in favour of which there is nothing on record so far.

A Note on the Bacteriological Finding in Dr. D. P. Ghosh's Case

C. C. BASU, B.A., M.B.

As there was no autopsy in the case, the diagnosis rests on the result of blood culture. One would naturally ask, whether the finding could be regarded as an accidental contamination. I would, therefore, describe briefly the technique employed. The blood was collected in an autoclaved syringe. The skin in front of the elbow was sterilised by painting the part with tincture of iodine and repeating it again after the first application had dried. The iodine was then removed by pouring rectified spirit over the part. 5 c.c.'s of blood was drawn from a prominent vein and at once put in a special test tube containing 50 c.c.s of glucose broth. The tube was incubated at 37 degrees. In 24 hours, the main mass of blood had clotted at the bottom of the tube, leaving a cobweb of fibrin, extending from the clot to surface of the broth. After 4 days' incubation, small white colonies of the size of a pin head were seen in the upper half an inch of the broth, attached to the fibrin threads. The broth remained clear. One of these colonies was picked up and smears made, and stained. Gram positive, branching filaments were seen. The biological properties of the organism are being studied.

The contaminations, usually met with in blood cultures, are either sporing or non-sporing bacteria. The former are due to gross contamination from outside. The non-sporing bacteria are due to defective sterilisation of the skin, being either staphylococci or diphtheroids. All these organisms usually appear in 48 hours.

One does not come across actinomyces in routine blood culture work. Actinomycotic infections, usually, run a chronic course. Pulmonary cases are often mistaken for tuberculosis and are only diagnosed, when the granules are discharged through sinuses. Metastasis in the internal organs like the kidney and brain usually come to light on the post-mortem table.

I am not aware of any case of septicæmia due to actinomyces infection recorded in literature, with the probable exception of a case of " Septicæmia due to higher bacteria " reported by Scudder in the Journal of Laboratory and Clinical Medicine, Vol. XVIII, 1932-33, p. 187.

CURRENT MEDICAL LITERATURE

MEDICINE

Essential Hæmorrhagic Purpura

Myers (*B. M. J.*, Sept. 7, 1935, page 445) gives the following as distinguishing features of essential hæmorrhagic purpura:—presence of thrombocytopenia, increased bleeding time from 20 to 30 minutes or more in rare cases; the spleen is not enlarged clinically or as seen during operation or when examined pathologically. The author treated 5 typical cases all of which were cured by splenectomy. Drug treatment is useless; blood-transfusion is distinctly valuable, but its effect does not last more than a fortnight. The author holds that the disease should be treated from the start as very serious and advises splenectomy when R. B. C. is above 2 million per cubic millimeter but if R. B. C. is below that transfusion should be done first to be followed later on by splenectomy.

Insulin in Cirrhosis of the Liver

Walker and Wood (*J. A. M. A.*, July 20, 1935, page 196) report a case of cirrhosis of liver when treated with insulin 15 units t.d.s. and a carbohydrate diet of 400 gms. daily for 3 months improved considerably with disappearance of ascitic fluid (he was having repeated abdominal tappings for the last one year) and the improvement is still being maintained. The author refers to 5 cases treated similarly by McCabe and Hart (*New York State Journal*, August, 1933, page 924). The ascitis of three of these cases disappeared and no sign of fluid was present on re-examination six months to six years later. One case of syphilitic cirrhosis was unaffected. The jaundice of one case of subacute yellow atrophy cleared up.

A Coronary Occlusion—Alleviation of Pain by Evipan—Sodium

Donath, Meyer and Zak (*Wiener Med. Wschr.*, Nos. 29/30, 1935) treated, on the instigation of Prof. J. Schnitzrer, 6 cases of acute occlusion of the coronary artery and 1 case of severe coronary sclerosis with symptoms of angina pectoris by a slow intravenous injection of 1½—2 c.c. of a 10% evipan-sodium solution (2—3 minutes for every c.c.) and found that the injection produced in each case deep sleep with freedom from pain. Sleep lasted from ½ to 10 hours and on waking the patients felt that the pain had lost much of its intensity. Two cases showed a drop in blood-pressure and a careful watch is to be kept on the blood-pressure recorded whilst the injection is being given.

The Radium Treatment of Graves Disease

Gudzent (*Therapie d. Gegenwart*, No. 7, 1935). Since 1919 the writer has been using (in about 1500 cases of radio-therapy up to the present) 10 radium tubes of 10 mgm. radium element, filtered through 1.5 mm. brass in galalith carriers ½ cm. thick and 1 cm. wide (measured from the median line). The tubes are arranged in pockets in such a way that 40 mgm. are in position over each thyroid lobe and 20 mgm. over the thymus gland. The skin is covered with a thin layer of cotton-wool. A bandage gives the whole apparatus a firm hold. The essential point is that the effective dose is given for 24 hours (only in quite exceptional, very severe cases for 2 × 12 hours) which is repeated as required after 10-12 weeks and, if necessary, again after 4—6 months. With Graves' disease the writer reports 68% cures and 32% improvements; with struma basedowificata (goitre with secondary symptoms of hyperthyroidism) 55% cures and 35% improvements; with thyrotoxicoses (with struma) 56% cures and 32% improvements. The case was considered cured when the signs of hyperthyroidism had disappeared, when the increased basic metabolism had shown a decrease and the patient had fully recovered his working capacity, even though the exophthalmos, tachycardia and struma had not entirely disappeared. Ordinary, non-toxic goitres are only treated with radium if they are inoperable on account of internal disease, adherence of the trachea and the blood-vessels, retrosternal struma, etc. Among cases of this kind 42% were cured, 40% improved. Iodine therapy of simple strumas demands great care, especially in the climacteric, as it frequently results in Graves' disease due to iodides with a serious issue. The duration of a cure with radium is from 2 to 12 months according to the severity of the case and the number of irradiations. In spite of determination of the basic metabolism, thyro-toxicoses (without struma) cannot always be differentiated from purely splanchnic disturbances or early psychoses (mania, schizophrenia, melancholia, compulsory neurosis). In cases of psychosis, radium is, of course, ineffectual. Struma retrosternalis responds particularly well. Injuries have never been observed; recurrence after several years was only observed in 10 cases and could be cured by resuming the radium treatment.

Summary *Ars. Medici*, No. 11, 1935, page 495.

Duodenal Ulcer—A New Method of Treatment

Henning and Norpeth (*Deut. Med. Woch.*, March 22, 1935, p. 452) have observed that the secretion of gastric juice of a healthy person ceases during sleep but in persons with duodenal ulceration the gastric juice not only ceases but becomes highly acid during sleep. The authors hold that night treatment is thus much more important than treatment by day when food generally exerts a neutralising effect on the acid secretion of the stomach. The authors have further found out that the secretion of gastric mucous membrane is entirely inhibited by hypertonic grape-sugar solution and advises the administration of 50 c.c. of a 60% grape sugar solution every hour day and night to a duodenal ulcer patient. By day the solution is given by mouth and by night through a fine feeding-tube passed through nose and retained in place so that the nurse can inject the solution without disturbing the patient's sleep. It soon becomes possible to give the patient small quantities of rusks with butter between two grape sugar meals but the sugar medication should be continued to the end of the treatment. The authors got spectacular results with this kind of treatment even in cases which were refractory to other therapy. The cessation of pain was almost immediate and the patient soon gained in weight through grape-sugar, there being no untoward symptoms happening in course of the treatment.

Carbolic Acid for Anthrax

Dorling (*Chin. Med. Jour.*, July, 1935, page 662) records his successful experiences with carbolic acid in cases of anthrax of the skin when the serum is not easily available. He injects 5% watery solution of carbolic acid through two to four punctures around and into the base of the pustule and applies a simple dressing over it. If any part of the pustule is found next day to be progressing a further injection is made into the area. Often only one, usually two and occasionally three or more injections are required. If the local condition becomes serious this treatment is combined with anthrax serum and N. A. B. intravenously.

Sedatives for Head Injuries

Philips (*Med. Jour. Australia*, July 27, 1935, page 108) investigated into the bad effects of morphine in cases of head injury and found that morphine in a dose having but little effect upon a normal animal, will produce signs of respiratory failure if it is preceded by even a slight degree of cerebral trauma. The author advises that the early treatment of restlessness due to head injury should be by dehydration (hypertonic saline) and not by drugs, and if sedatives are required at all a drug should be chosen which has the least depressant action on the vital centres.

Congo Red in Treatment of Intestinal Hæmorrhage

Szirmai (*Munch. Medizin. Wochen.*, Aug. 30, 1935, page 1403) treated very successfully ten typhoid patients with severe hæmorrhage by 10 c.c. of 1% solution of congo red intravenously. In four cases only one injection stopped the hæmorrhage; in the other cases two or three injections were required. When it is necessary to repeat the injections they are given at the interval of 12 to 24 hours. Besides mild attacks of chill happening in two cases there were found no harmful results by the injection. Experimentally the drug was found to be non-toxic and cause to an increase of blood platelets and the monocytes and the coagulability of the blood.

Computation of Basal Metabolic Rate

Oettinger (*Zentral fur Cher.*, Sept. 7, 1935, page 2174) determined in 59 patients the basal metabolic rate by means of an apparatus and computed the rate according to Read's formula and found only slight discrepancies in majority of the cases. Read's formula is as follows:

Basal metabolic rate $= 0{\cdot}75$ (pulse rate $+ 0{\cdot}74$ pulse pressure) $- 72$.

The author also corroborates Read's statement that the formula does not give very reliable results in persons less than 15 and more than 55, in cases of gross cardiac and renal lesions. The author holds that even with these limitations the formula is of great value to the general practitioner.

Gastroscopy

Schindler (*J. A. M. A.*, Aug. 3, 1935, page 352) after analysing 2,000 gastroscopic examination reports, gives the following distinguishing features of ulcer, cancer, and gastritis. The floor of a simple ulcer is yellowish or white, while that of a cancer is dark-brown or violet and a carcinomatous ulcer has a ragged edge. Superficial gastritis shows hyperæmic areas, excessive mucous, and occasional small erosions. In atrophic gastritis the mucous membrane is greyish green and shows distinct blood vessels. Hypertrophic gastritis shows swollen velvety mucosa with visible warty swelling and erosion.

Medical Treatment of Congenital Pyloric Stenosis

Elizabeth Svensgaard (*Hospitalstidende*, Copenhagen, August 13, 1935, page 833) treated 71 patients from 1911 to 1922 with gastric lavage and feeding by duodenal tube, 47 patients from 1922 to 1927 with atropine and 61 patients since 1927 with atropine methylnitrate. The average hospitalization was respectively 108, 96 and 77 days and the mortality 7.1, 6.4 and 1.6% and the average increases in weight per week was 62, 91 and 122 gm. The author advises first to deal with dehydration by salt solution and then to treat with atropine or atropine methylnitrate which is given half an hour before meals. The author holds that the prognosis is grave particularly in cases which show a tendency to hæmorrhage.

Gargling

W. **Haase** (*Klin. Gargling. Wochen.*, August, 1935) investigated rœntgenologically to what extent the gargling fluid comes in contact with structures on the pharynx by means of rœntgenograms made with contrast medium and after contrast visualisation of the tonsils he found that the gargling fluid reaches, under the most favourable conditions, the palatine arch and the upper tonsillar pole, but not the tonsils or the post. pharyngeal wall. Moreover the antiseptic action of the fluid used is very slight and the use of the gargling is in direct opposition to the rule that all inflammatory processes should be kept quiet. He thus concludes that we should dispense with the use of gargles in the treatment of inflammation in the region of pharynx.

New Procedure for Lumbar Puncture

Reese and **Shulak** (*Wisconsin Med. Jour.*, Sept. 1935, page 613) recommend to give intravenously 50 c.c. of a 0.225 hypotonic solution of sodium chloride to a patient from 5 to 10 minutes before the spinal puncture to prevent postpunctural headache. The authors treated 25 patients in the above way and only one had slight headache lasting for a few hours. To test the absolute value of the injection in the prevention of postpunctural headache he performed several lumbar punctures without the preliminary injection and after the postpunctural headache actually developed he injected the same hypotonic saline solution, the response being most variable; some having prompt relief of the headache, in some the headache was not intense and in the remaining there was no improvement. The best result was obtained when the hypotonic solution was given from 5 to 10 minutes before the lumbar puncture.

The Value of Colloidal Sulphur in the Treatment of Chronic Arthritis

RAWLS, GRUSKIN and RESSA (*Amer. Jour. of Med.*, Sept., 1935, pages 400-409) investigated the value of colloidal sulphur in the treatment of chronic arthritis and found that the percentage and degree of clinical improvement was greater in those patients with a subnormal cystin content of the finger-nail than in those with a normal content. The authors found out that patients can tolerate fairly large doses of colloidal sulphur (10 to 30 mgs. twice a week) and with doses larger than these toxic symptoms develop, *e.g.*, fatigue, drowsiness, headache, increased pain, stiffness and swelling of the joints but they do not last long and are not of severe consequences. The authors have also observed that with clinical improvement of the case there is a concomitant reduction in the sedimentation rate and non-filament cell-count.

Treatment of Syphilis of the Heart and the Coronary Arteries

LOVE (*Med. Clinics North America*, May, 1935, page 1533) holds that ordinary arsphenamine therapy as used in early syphilis is dangerous and sudden death or progressive heart failure may occur by (1) therapeutic shock; (2) intrinsic arsphenamine toxicity—a predisposition to develope ventricular tachycardia and fibrillation; (3) therapeutic paradox—general improvement followed by relapse, probably produced by the rapid replacement of the syphilitic lesion by scar tissue. The author advises the following modified treatment. In cases of angina pectoris and suspected coronary disease Pot. Iodide is given in large doses for ten days followed by Bismuth for some weeks and then neoarsphenamine in doses not exceeding 0.2 gm. In aortitis the initial dose of arsphenamine is 0.1 gm. and this drug continued every week for 8 to 10 weeks followed by a similar course of Bismuth and these two drugs are used alternately for a year at least, the maximum dose of neoarsphenamine being 0.4 gm. In aortic insufficiency the dose must be most gradual. In congestive heart failure the patient is hospitalised and compensation restored by digitalis before any neoarsphenamine therapy is started, the dose in this case rarely rising above 0.2 gm. With this method of treatment the author has found marked symptomatic improvement and increased duration of life.

Treatment of Influenza

GASKEL (*Practitioner*, May, 1935) recommends absolute rest in bed, calomel and the following mixture—

Re.	Tinct Aconite.	m 1
	Spt. Aether Nit. . . .	m 12-25
	Aqua Chloroform . . .	ad. ½ oz.

Sig: To be taken four hourly.

This relieves pain and if headache persists after this, aspirin and Dover's powder may be given at night or four hourly. "Salicylates merely depress still more without doing any good." Vaccines proved disappointing, but S. U. P. 36 intramuscularly (2 to 3 injections) has been found "of definite use in cases with a temperature, but not otherwise." For cardiac complaints digitalis is given in one-grain tablets of digitalis folia; for backache large linseed poultices or hot-water bottle; for faintness and depression brandy may be used. When profound depression persists the author gives the following mixture.

Re.	Tinct Valer. Ammon . .	m 20-25
	Pot. Brom.	gr. 10-15
	Inf. amara (Hewlett) . . .	m 20
	Aqua	ad oz. ½

Sig.: To be taken thrice daily.

The diet is fluid throughout the acute stage. For prophylaxis the author has found the anti-influenza mixed P. D. brand of vaccine very useful.

SURGERY

Thrombophlebitis and Embolism, with Special Reference to Danger of Pulmonary Embolism in Injection Treatment of Varicose Veins

THEIS (*Surg. Gyn. and Obstet.*, May, 1935, page 996) gives the following as contributing causes of pulmonary embolism in thrombophlebitis: (1) Limited damage or destruction of the endothelial lining of a vein leading to thrombus formation provides insufficient attachment of the clot to the wall of the vein. (2) Inactivity of the patients resulting in the formation of large coagulation stagnation thrombi instead of the limited solid mixed diposition thrombi. (3) Coagulation solutions for intravenous injections produce unattached coagulation clots. (4) Suppurative infection, either caused by direct contamination from surrounding tissues or hæmatogenous in origin is followed by disintegration and loosening of the clot.

(5) Direct trauma or massage of the thrombotic area may loosen or detach a portion of the thrombus. Pulmonary embolism occurs mostly in bed-ridden, debilitated and cardiac patients. With limited attachment of the thrombus to the wall of the vessel, the deficient circulation of blood aids extension to secondary red stagnation thrombus formation and these are very easily dislodged and carried away in the circulation. In the injection treatment of varicose veins, proper selection of cases, skilled technique, and co-operation of the patient after injection by continuing routine daily activities will lessen the frequency of pulmonary embolism.

Treatment of Empyema in Children by Aspiration

Burpe (*Georgia Med. Assoc. Jour.*, Sept., 1935, p. 326) treated 26 cases of empyema in infants by aspiration with cure in 20 cases and death in 2 cases; 4 cases were operated later on with no mortality. The pus on culture showed pneumococcus in 60%, staphylo. in 11%, strepto. in 5.5 and it was sterile in 5.5%. The average number of aspiration was 10 and the average stay in the hospital was 61 days. There was found no complication except a few cases only which showed small subcutaneous abscesses. There was no permanent deformity in his series.

Bacteriophage Therapy

Lampart, Boyce and McFetridge (*Amer. Journ. Surg.* September, 1935, p. 436) treated about 1,000 cases chiefly of carbuncles, furunculosis and hand infections and had 90% successes. The authors think that the success of their treatment is primarily due to the technique of application *viz.* the direct contact of the bacteriophage with the infected tissue by daily liberal application. The relief of pain is quicker and the duration of treatment is shorter as compared with other therapy. The authors did not find any untoward results from its use during the course of treatment.

Diathermy for Papilloma of the Bladder

Laidley, Earlam and Walker-Smith (*Aust. and New Zeal. Jour. Surg.*, July, 1935, p. 18) report on the revolution that has taken place in the treatment of vescical papilloma by surgical diathermy. The results are given of 301 cases treated by the said method. Of these 243 were males and only 58 females; 121 were cases of papillomata and 180 of carcinomata. They had only 7 deaths with suprapubic diathermy in 72 cases but in a similar number treated by transurethral diathermy there were no deaths. The two methods are fully described. The authors hold that as a rule all sessile papillo-carcinomata and all solid growths, unless small or pedunculated, should be approached suprapubically and pedunculated papilloma and those that can be destroyed completely should be treated transurethrally. To exclude the possibility of recurrence the patients should be examined cystoscopically at frequent intervals.

Calcification of Gall-bladder

Scoppetta (*Arch. Ital. chirur.*, p. 731) reports a case of complete calcification of the gall-bladder in a woman of 62 who showed no billiary symptoms of either subjective or objective character. The patient was practically healthy except for a presence of a laparocele. The diagnosis was made during X-ray examination of the gastro-intestinal tract in connection with the laparocele. A cholecystectomy was done. The author holds that this diffuse calcification of the gall bladder originates in the inflammatory process of long duration and spontaneous regression of the gall bladder. The X-ray diagnosis of calcified gall bladder is an indication for cholecystectomy.

OPHTHALMOLOGY

Ocular Leprosy in Egypt

Riad (*Bull. Ophthal. Soc. of Egypt*, Vol. XXVII, p. 79, 1934) after studying 108 patients attending the leper clinic of Cairo deals with seats of the disease under the headings of eye-brow, cilia and lids; conjunctiva; cornea; and uveal tract.

Eyebrow, cilia and lids: partial anæsthesia of the skin of eyelids and destruction of the hair follicles, lagophthalmos due to the involvement of the nerve and ulceration of the skin by breakage of the leprous nodules.

Conjunctiva: anæsthesia leading to xerosis: isolated nodules breaking down to the formation of ulcers: entropion and trichiasis.

Cornea: corneal sensation is diminished or lost: corneal nerves thickened when seen with slit-lamp: keratitis of 4 distinct types—(1) Leprotic pannus, (2) superficial punctate keratitis, (3) lepromata may extend from the conjunctiva on to the cornea, (4) interstitial leprotic keratitis.

Uveal tract: iritis of a plastic nature or a greyish nodules on the surface of the iris.

The author did not find any abnormality by perimetric observation or by ophthalmoscopic examination of the fundus. The author holds that lepers bear operations on the eye very well.

An Unusual Case of Idiosyncrasy to Yellow Oxide of Mercury and Zinc Sulphate Ointment

Fahim (*Bull. Ophth. Soc. of Egypt*, 1934, Vol. 27, p. 90) reports a case who, when treated for corneal nebulæ with yellow oxide of mercury, developed dermatitis and œdema of the lids and face. The same patient had a severe reaction resembling erysipelas when he was treated with zinc sulphate ointment for his (diplobacillary) blepharitis.

On the use of Saturated Solution of Magnesium Sulphate in the Treatment of Acute Inflammation of the Conjunctiva and Cornea

Migally (*Bull. Ophth. Society of Egypt*, 1934, Vol. 27, p. 98) recommends continuous use of 50% mag. sulph. compress in cases of acute conjunctivitis where the use of silver nitrate and milk injections are contra-indicated because of extensive corneal ulceration. Mag. sulph. is preferable to sodium chloride because it brings about dilation of the vessels, has an analgesic action, and is not easily absorbed.

Larocain—A New Local Anæsthetic for Ophthalmic Surgery

Biondo (*Rass. Ital. di Ottal*, January—February, 1934) writes that Larocain, a synthetic substitute for cocaine, is superior to cocaine as a local anæsthetic, for it does not damage the corneal tissues, does not produce mydriasis nor disturb accommodation and it is much less toxic.

Acetylcholine in Embolism of the Central Retinal Artery

Orr and Young (*B. M. J.*, June, 1, 1935) report two cases in detail to whom acetylcholine was given by subconjunctival injection for obstruction of the central retinal artery. The injection was followed by immediate and considerable increase in size of all the retinal vessels with marked improvement in the field of vision. The authors further give out that they did not find any symptom of collapse, the effect being local and causing no dilatation of the retinal vessels of the other eye.

OBSTETRICS AND GYNÆCOLOGY

Persisting Headache During Lactation

Beilby (*B. M. J.*, August 24, 1935, p. 337) reports 5 cases of persistent headache during lactation, the headache disappearing characteristically on weaning. The headache was usually frontal, described by the patients as "behind the eyes," sometimes it was on the whole head. No pathological basis was found out for this headache—urine was normal, blood-pressure normal, fundi normal, no visual defect and except in one case there was no anæmia. Drugs gave only temporary relief. Treatment suggested by the author is mainly prophylactic-antipartum therapy with suitable diet, vitamins, iron, and calcium or when this has not been done similar treatment during puerperium or finally weaning if the symptoms justify it.

Ergotamine Tartrate in Puerperium

Der Brucke (*J. A. M. A.*, September 14, 1935, p. 867) used successfully ergotamine tartrate in a large number of patients in puerperium and found that a mildly tonic contraction of the uterus is produced and maintained by it. He uses just after the delivery of the placenta one ampule (1 c.c.) of ergotamine tartrate hypodermically and during the succeeding 3 days the patient is given 2 c.c. of the alkaloid solution by mouth in doses of 0.4 c.c. between 6 a.m. and 10 p.m. Compared with control patients and with those having postpartum pituitary extract the author found a more rapid decrease in size of the uterus, a diminished lochia (absent in 60% by the day of discharge from the hospital) and a corrected morbidity rate being only 2.25%.

Vitamin C in the Treatment of Gynæcologic Hæmorrhage

Junghans (*Klin. Wochen.*, June 22, 1935, p. 899) treated 35 women with cevitamic acid for gynecologic hæmorrhage, majority of them being menopausal metrorrhagia. In 33 of these the bleeding was stopped on the 4th or at the latest on the 6th day of the treatment. In two patients the injections were of no avail. Fifty mg. of cevitamic acid was injected, intravenously or intramuscularly, twice daily. The mode of action is still unknown. No harmful effect has yet been observed after the injection.

Intraspinal (Subarachnoid) Injection of Alcohol for Pain Associated with Malignant Condition of Female Genitalia.

GREENVILL and SCHMITZ (*J. A. M. A.*, August 10, 1935, p. 406) treated very successfully 25 women with advanced carcinoma of the genitalia with intraspinal injection of 0.5 c.c. of 95% alcohol. The injection is simple, entails very few risks and it brought relief to 24 out of 25 patients. The patient is placed lying on the side opposite to that on which most of the pain is felt; a pillow is placed under the pelvis, the back is arched as much as possible and the body turned somewhat ventrally and the head lowered slightly. In this position the lumbosacral spine is raised to the highest point and the posterior (sensory) roots lie horizontally while the anterior roots come to lie in a plane usually out of reach of alcohol. The space chosen for injection depends on the height of the pain—it is usually the last lumbar space. The procedure used is practically the same as for an ordinary lumbar puncture—the injection being made with a tuberculin syringe very very slowly *i.e.* taking about 2 minutes to finish 0.5 c.c. of alcohol and care being taken not to mix the alcohol and spinal fluid in the syringe. In this way the alcohol rises to surround the posterior nerve roots. Numbness of the upper leg soon develops and lasts a few hours to a few days. The patient is kept on her side two hours and then allowed to go. If pain is present on both sides the same procedure is used one week later on the opposite side. The result of their treatment is as follows:—Of the 25 patients so treated 20 were completely relieved of pain, 3 were partially so and in 2 cases the treatment failed. One of the failures was subsequently relieved by injection at higher level and the other had previously unsuccessful sympathectomy. Autopsy in the second failure revealed bilateral pyonephrosis to have been present to account for it.

NUTRITION AND DIETETICS

The Effects of Deficiency of Iodine and Vitaman A on the Thyroid Gland of Albino Rats

COPLAN and SAMPSON (*J. Nutrition*, 1935, IX, pp. 469—87) report that deficiency of iodine produces an initial hypertrophy of the thyroid gland followed by atrophy and deficiency of vitamin A produces definite hypertrophy in female rats but consistent atrophy in males. Combined deficiency of iodine and vitamin A produced an initial hypertrophy in both sexes; but in males atrophy soon follows. This experimental enlargement of the thyroid is always found to be more pronounced and prolonged in females than in males.

The Effect of Vitamin D on the Calcium Content of the Dentine

FISH (*Journal Physiol*, 1935, 84, pp. 272—278) after giving to three dogs massive doses of calciferol and $CaCo_3$ over extended periods analysed the dentine of symmetrically opposite teeth at the beginning and end of the treatment but found no significant change in the calcium content of the dentine though the blood-calcium was almost doubled and röntgenograms showed an increase in the opacity of the bones.

Dermal Absorption of Vitamin D

ASTROWE and MORGAN (*Amer. J. Dis. Child.*, 1935, 49, pp. 912—922) report that viosterol is absorbed through unbroken skin of rats in sufficient amounts to prevent and cure rickets, the possibility of the substance applied being licked off, having been carefully excluded. No signs of hypervitaminosis developed though large doses of viosterol were used.

Influence of Vitamin C on Diphtheria Toxin

POLONYI (*Wien. Med. Wochen.*, 1935, 85, pp. 685—686) has found that the livers and adrenals from guineapigs infected with diphtheria showed a reduced vitamin C content and that injection of vitamin C into guineapigs, infected with diphtheria, decreased the severity of the symptoms and increased the survival time. The author holds that the use of ascorbic acid in addition to antitoxin will be beneficial in the treatment of diphtheria in man.

The Effect of Oil of Peppermint on the Emptying Time of the Stomach

SAPOZNIK, ARENS, MEYER and NECHELES (*J. A. M. A.*, 1935, 104, 1792—94) report that the emptying time of the stomach is shortened if 2 ml. oil of peppermint be added to a meat meal fed to dogs. The time of emptying of the stomach in human beings after a Ba. meal showed also a decrease of about 50% when 2 ml. oil of peppermint were added to the meal (X-ray determination).

Gastric Hydrochloric Acid Secretion in Diabetics

WIECHMANN (*Deut. Med. Wochen.*, 1935, 61, pp. 749—52) determined the gastric acidity in 124 diabetic patients and found that anacidity was present in 25%, subacidity in 15%, normal values in 37%

and hyperacidity in 23% and there is no typical curve of acidity for diabetics.

PATHOLOGY AND BACTERIOLOGY

The Effect of Magnesium Salts on the Heart

Zwillinger (*Klin. Woch.* October 5, 1935, p. 1429) after repeated experimentation with magnesium salts in a series of patients with extra systole and paroxysmal tachycardia found that an intravenous injection of 10 to 20 c.c. of 15% mag. sulph. solution produced immediate disappearance of the extra systole, a lowering of blood-pressure by 10 to 20 mm. Hg. and a sensation of heat in the body of the patient. The author claims that the time between the injection and the sensation of heat is the time taken by the blood to circulate through the body and that the intravenous injection of 4 c.c. of 10% solution of mag. sulph. is a simple clinical method for its determination. Moreover, the author has found during his experiments that rabbits which had been poisoned with digitalis and strophanthin could be kept alive by mag. sulph. injection when untreated animals died within one to two hours.

A Few Quick Blood Tests for the Practitioner

Lipp. (*Munch. med. Wschr.*, No. 3, 1935).

A severe leucocytosis or pyuria may be recognized by the formation of a more or less jelly-like mass in the test tube when the blood or urine respectively is mixed with half the amount of 1/10 normal solution of caustic soda—Leukæmia: A few drops of blood are dissolved in a test tube in water, and a few drops each of 1% dimethyl paraphenyl diamine, 1% naphthol, and 1% liquor potassæ are added. A white precipitate indicates lymphatic leukæmia, a blue precipitate, myeloid leukæmia. Lymphocytes form no oxydases, and the precipitate is therefore white—Demonstration of residual nitrogen in blood (that is, the nitrogen which remains in blood after the albumen has been removed) with the xanthoprotein test. The blood (serum, plasma) is freed of albumen with 20% trichlor acetic acid in the proportion of 1:1 2 c.c. of the filtrate is boiled with 0.5 nitric acid for one minute. After cooling, add 1.5 c.c. 33% caustic soda; observe with light passing through the liquid: light yellow is normal, clear yellow is kidney insufficiency, deep yellow, uræmia. Or according to Weltmann-Barenscheen: remove the albumen from the serum with 20% trichlor acetic acid. Two drops of Ehrlich's aldehyde reagent are added to 1 c.c. of the filtrate. Yellowish green indicates an increase in residual nitrogen (over 36 to 40%). With severe azotæmia, the filtrate assumes a pink to red colour spontaneously, after standing a short time.—A simple micromethod of determination of blood sugar: two drops of blood from the ear-lobe are caught in a tube containing 2 c.c. water. Removal of albumen with 2 c.c. 1.2% picric acid, shake. The dirty brown mixture is then filtered absolutely clear through a small filter (round filter 587 E of the firm of Zeiss-Ikon); to 1 c.c. of the filtrate is added 0.1 c.c. 10% caustic soda; the mixture is heated over a small flame or in boiling water (about one minute) until the optimal colouring is reached; cooling in a stream of water. With normal blood sugar (around 120 mg.%) there is no definite change in colour after warming. Up to 200 mg.%, there is a trace of brown colouring; up to 300%, marked brown colouring; and with 500%, deep brown. A simple erythrocyte sedimentation test: Aspirate 0.5 c.c. 5% sodium citrate into an injection syringe, change the needle, then aspirate 2 c.c. blood from the vein, empty the mixture slowly (without forming foam) into a test glass 7 cm. long and 7 mm. wide up to the mark 5 c.c. The test glass is then closed with the forefinger and slowly inverted two or three times, then placed in an upright position. Read the height of the erythrocyte column from the mark, in millimeters 45 minutes later. 5 mm. is normal (for women, 10 mm.).

Summary *Ars. Medici*, No. 5, 1935, p. 213.

Pathologic Changes Resulting from Accurately Controlled Artificial Fever

Hartman and Major (*Amer. Journ. Clin. Path.*, September, 1935, p. 392) studied the pathological changes resulting from artificial fever therapy applied on two clinical cases and twenty dogs. Of these twenty dogs eighteen were subjected to fever of various degrees and duration and the remaining two were used as controls having only a sedative sodium amytal. The most important post-mortem findings were engorgement of the vessels (specially capillaries), hæmorrhage and degeneration and these changes were most prominent in the brain in the shape of hæmorrhagic encephalitis. In the lungs the authors found hæmorrhagic pneumonia, in the adrenals hæmorrhage and degeneration of the cortical substance. The authors also observed that sodium amytal in large doses caused marked dilatation and engorgement of the vessels of the brain and as such the fever therapy and sodium amytal should not be used in combination.

NOTES ON THE MEDICAL SCHOOLS OF INDIA

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Director-General, Indian Medical Service.

The following are the Medical Schools dealt with in this note:—

MADRAS

1. The Stanley Medical School, Madras.
2. The Lady Willingdon Medical School, Madras.
3. The Missionary Medical School for Women, Vellore.

BENGAL

4. The Campbell Medical School, Calcutta.
5. The National Medical Institute, Calcutta.
6. The Medical School, Calcutta.
7. The Ronaldshay Medical School, Burdwan.
8. The Medical School, Bankura.
9. The Medical School, Dacca.
10. The Lytton Medical School, Mymensingh.
11. The Medical School, Chittagong.
12. The Medical School, Jalpaiguri.

BOMBAY

13. The B. J. Medical School, Poona.
14. The B. J. Medical School, Ahmedabad.
15. The Medical School, Hyderabad (Sind).
16. The Missionary Medical School, Miraj.
17. The National Medical College, Bombay.

UNITED PROVINCES

18. The Medical School, Agra.
19. The Women's Medical School, Agra.

BIHAR AND ORISSA

20. The Medical School, Darbhanga.
21. The Orissa Medical School, Cuttack.

PUNJAB

22. The Medical School, Amritsar.
23. The Missionary Medical School for Women, Ludhiana.

CENTRAL PROVINCES

24. The Robertson Medical School, Nagpur.

ASSAM

25. The Berry-White Medical School, Dibrugarh.

BURMA

26. The Medical School, Rangoon.

MYSORE

27. The Medical School, Bangalore.

CENTRAL INDIA

28. The King Edward Hospital Medical School, Indore.

THE MEDICAL SCHOOLS OF INDIA

In the course of journeys throughout the greater part of India, entailed upon me by service in different provinces and by my present appointment, I have taken the opportunity to visit many medical schools where education of the licentiate medical standard is given. There cannot be many medical officers whose duty will have led them to visit many of these medical schools in widely distant provinces and whose training can qualify them profitably to note on their observations: so it has occurred to me that remarks upon the medical schools of India as a whole considered with information about each school should be of aid to the teachers and superintendents of these schools and to the Governments and other bodies who control them. Indeed it seems to me that the collection of such information is a necessary prelude to a general improvement in the standard of licentiate medical education.

There are 28 medical schools in India, including one in Burma: they are under provincial or other local control with but little centralising influence and the staff of one school have no direct knowledge of what is being done in distant schools outside their own province. No one can have visited many of these schools without being struck by the difference in standard amongst them, by the variations in buildings, equipment and staff. There is much more difference between the best and the worst medical school than there is between a good medical school and a medical college affiliated to a University. The reason for this is not difficult to see. There have been stronger centralising and equalising influences at work among Universities and Medical Colleges than among Medical Schools. For one thing the medical colleges have of recent years had more attention paid to them and by reason of their past association with the General

Medical Council of Great Britain a minimum standard for higher medical education has been arrived at, a standard that it will be the work of the Medical Council of India to sustain and improve. The standard of education in medical schools is under the eye of provincial medical councils, who consider local needs; but these schools are without any central co-ordination. Whether such co-ordination is necessary or not, it is advisable that the various schools should have some knowledge of what the schools in other provinces are doing and some means of comparison. It has been suggested that a single inspecting body should visit the schools and report on them. Since these 28 schools are placed all over India and Burma, such inspection would obviously be expensive and lengthy and is outside present consideration. But meanwhile something can be done and to this end information has been collected on some essential points in medical education at the schools and some of that information is given here. Certain details have been obtained from the annual reports of the medical schools and questions on other practical points have been sent to the school authorities to enable this information to be enlarged. Here I take the opportunity of thanking those authorities, whether of Government or private schools, for sending me their reports and the answers to my questions. The parts of this information that lend themselves to tabulation are given in a statement at the end of these remarks and some explanatory notes and comments of my own precede the statement.

I wish it clearly understood that there is no criticism here of any individual school. From what I have seen of the schools I believe that they are all doing their best with the sometimes poor means, financial or otherwise, at their disposal, and much credit is due to their superintendents and their staffs for having done as much as they have. But the staffs of these schools will be the first to admit that there is room for improvement. When they study the tabulated statement here they will identify their own school and see what other schools are doing and they may be able thereby to induce changes in certain items in their own schools. If so, that will be all to the good; and they can be assured that the figures relative to their own school are confidential. To ensure that being so I have designated each of the schools in the statement by a letter of the English or Greek alphabet. The superintendent of a particular school can identify his own place from the figures published in the statement, with which he has furnished me; but no one else is likely to recognise his school from these figures.

It is not suggested that the figures here given can show a complete picture of the school's condition. Many questions, pertinent to the efficient instruction of medical students, have not been asked. For instance, no enquiry has been made whether the hospital attached to the school possesses a radiological section, or has a proper staff of nurses or a Nurses' Training School. All these, and other things, are items which most of us regard as necessary for the complete training of medical students; but we know that several of these hospitals do not possess these things, and this first enquiry is only into the points we regard as more essential.

In the comparative statement we have not tabulated replies to all the enquiries made, though the replies on other points are also interesting. Enquiry was made as to the cost to the educating authority per student per annum after laying down for the sake of uniformity certain principles on which this calculation should be made. The average cost seems to be about Rs. 300 per annum per student, though schools for women only usually cost more, probably because of the fewer number of students in comparison with the number of staff to be paid. There is, however, extraordinary variation in the replies received. Thus in School J the cost is only Rs. 60 per annum and 80 per cent. of the students are private, and in School F the cost is Rs. 62 per annum and all are private: while in School N, a women's school, the cost is Rs. 960 per annum and none are private, and in School V, where the sexes are mixed, the cost is Rs. 952 for a stipendiary and Rs. 564 for a private student: presumably reckoning without the student's fees the cost would be Rs. 952 for every student. This difference in cost per student is apparently reflected in the standard of instruction, because School N certainly compares well with others.

Question was asked also on the preliminary standard of education before entry to the medical course. In all provinces the Matriculation or School Leaving Certificate is the standard usually taken, though one province is obtaining an appreciable number of Intermediate-passed entrants. Another province accepts women students at a lower entrance standard. I believe this to be a mistaken policy. It can be defended by representing the need for women doctors and the lack of applicants unless the entrance doors are widened: but it is doubtful if a woman who has not attained Matriculation standard can take with profit a medical course, and at any rate the time has now come when a higher demand should be made on women entrants. We should have women doctors of satisfactory standard or not at all. This leads naturally to the much bigger question, whether we should try to educate a large number of students in an inferior manner or fewer students in a comparatively satisfactory manner: whether we should have many inferior schools or a few satisfactory ones. Because we cannot have it both ways. There are only a few places in each province with hospitals large enough to provide clinical material for a medical school. Further, the cost of the school and hospital buildings, and the cost of the equipment necessary to instruct students properly both in school and hospital, are such that no province would be prepared to provide a correct standard of buildings and equipment for more than one or two schools. Perhaps more important still is the matter of the teaching staff. Except in the two largest cities where the services of a well-qualified staff can usually be obtained on a voluntary basis, there is not yet in any province a sufficiency of medical men, highly qualified enough to be considered of medical education standard, to staff more than one or two medical schools in addition to the medical colleges. If, therefore, we multiply medical schools they must, at any rate for the present, be inferior in several respects. It is a matter of policy to be decided, therefore, whether we should have several inferior or a few satisfactory schools and different provinces have followed different lines, while the same province has apparently changed its policy with the times. The Madras Presidency formerly had 6 or 7 medical schools, but now has only 3, two Government and one private. The Bengal Presidency has 9 schools, 6 Government and 3 private, and some of them of recent establishment. Which is the correct policy? It may be argued that many cheap doctors are wanted for the villages, to replace inferior practitioners or supply some sort of medical aid where none exists; that it is no good sending expensive doctors there because the people cannot pay them; that it is better to send out registered medical men with some sort of qualification, however inferior, than to leave the rural population to ignorant and unqualified practitioners. It has even been said we should multiply compounders and send them to the villages since doctors will not go and cannot get a living. This question was considered at length in Madras in 1929 when a Medical Education Committee was established that decided that the Presidency did not so much need more doctors as better doctors. Experience seems to show that the average medical man, if not properly educated, when he is let loose on the world to practise his profession, himself tends to degenerate and to become hardly better than the man he is intended to replace. It is only the exceptional man who, without a satisfactory education, can make good and educate himself until he becomes a really good doctor. If that is so, it certainly seems better to have a few satisfactory schools rather than several inferior ones and that seems to be the generally accepted policy, because the average number of medical schools per province or State area works out to about 2½.

One method that has been used in the past to economise equipment and teaching staff is to have a medical school in the same building as the medical college and using the same hospital. This is not satisfactory: both college and school are likely to suffer, and the experience of the past has led generally to the abandonment of this plan. There is only one place where this is still done.

Before examining the tabulated statement we may consider what standard in certain respects we should try to attain. From what has been said above it will be expected that most of the medical schools will be overcrowded with students, and indeed that is so, except in the case of a few schools for women. This is certainly regrettable, because overcrowding of students in proportion to laboratory accommodation and equipment, amount of clinical material, and number of teaching staff, are the most potent causes of inefficiency of education. The province with the largest number of schools has them even more overcrowded than the other provinces.

Here I propound seven standard rules to which I consider a school should try to attain. All these rules are concerned with the proportion of patients and certain equipment to the number students. There are doubtless other rules of proportion: I am suggesting only a few that experience has taught me are important. If anyone thinks that these standard rules tend unduly to restrict the number of students I can only give it as my experience that lower numbers tend to better education.

	Sex of Students.	Total No. of Students.	Maximum number of annual admissions.	Staff. Maximum marks 5 under each head.					Percentage marks necessary for pass at final examinations.	Appointment of Examiners. Satisfactory + Unsatisfactory –	No. of beds in attached hospital.	Daily average of in-patients.	Annual number of confinements.	Number of Microscopes for teaching.		Length of course in years.	Conformity with Standard Rules
				School.		Hospital.											
				Numbers.	Qualifications.	Numbers.	Qualifications.	Arrangements of duties.						Physiology.	Pathology.		
A	M & F	305	62	1	2	1	2	1	33	–	236	197	247	12	11	4	Deficient in all 7 rules.
B	M	276	50	2	3	2	3	2	50	–	216	199	93	20	18	4	,, Ditto.
C	M	180	50	1	2	2	3	2	50	+	109	88	14	7	10	4	,, Ditto.
D	M & F	580	150	2	3	2	3	5	40	+	717	454	342	32	28	4	,, in all but Rule *ii*.
E	M & F	399	100	4	4	5	4	5	40	+	288	174	254	18	17	4	,, in all 7 rules.
F	M & F	434	100	3	3	4	3	4	40	+	150	115	125	16	8	4	,, do.
G	M	199	50	1	1	2	2	2	40	+	146	122	41	16	8	4	,, do.
H	M	222	50	3	2	4	2	1	40	+	83	63	54	12	4	4	,, do.
I	M & F	490	115	2	2	2	3	3	40	+	261	259	144	48	8	4	,, do.
J	M	238	50	1	1	2	1	2	40	+	112	96	34	14	4	4	,, do.
K	M	168	50	1	1	2	2	2	40	+	109	85	47	19	5	4	,, do.
L	M	171	55*	2	3	2	3	3	40	+	101	85	9	13	2	4	,, do.
M	M	503	66	4	5	4	5	4	50	+	354	389	2,722	88	23	5	,, in *i*, *ii*, *iv* and *vii*.
N	F	96	20	4	4	4	4	5	50	+	130	175	2,109	32	9	5	,, in *vii* only.
O	F	108	25	3	3	3	3	5	50	+	250	146	284	15	15	5	,, in *vi* and *vii* only.
P	M & F	416	100	4	3	4	3	3	50	+	176	300	17	30	32	4	,, in all 7 rules.
Q	F	128	36	4	2	5	2	4	50	+	240	175	1,068	19	10	4	,, in *iii*, *vi* and *vii*.
R	M & F	241	44	1	2	3	3	2	40	–	131	187	46	29	17	4	,, in all 7 rules.
S	M & F	199	33	2	2	2	3	3	40	–	218	181	62	12	6	4	,, in *iv*, *v*, *vi* and *vii*.
T	M	309	52	3	3	4	4	5	40 & 33	+	296	258	243	33	25	4	,, in all except *i*.
U	F	100	25	2	4	3	4	4	40 & 33	+	155	113	1,124	3	6	4	,, in *iii*, *vi* and *vii* only.
V	M & F	168	39	4	5	4	5	3	40	–	540	579	2.310	10†	6‡	4	,, in *vi* and *vii* only.
W	M & F	318	60	2	3	3	3	2	40	+	300	225	803	24	30	4	,, in all except *v*.
X	M & F	174	71	1	1	2	2	3	40	+	220	233	215	13	3	4	,, in all except *ii* and *iv*.
Y	M & F	119	36	1	2	2	2	2	40	+	144	120	41	12	2	4	,, do.
Z	M	46	18	2	3	2	2	1	40	+	250	225	90	7	10	4	,, in rules *v*, *vi* and *vii*.
Z¹	M & F	233	45	2	2	3	3	4	40	–	250	250	2.628	12	10	4	,, in *vi* and *vii* only.
Z²	M & F	233	50	4	5	5	5	3	40	+	75	61	157	14	. .	4	,, in all 7 rules.

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*Since lowered to 35.

† + 31 from College.

‡ + 44 from College.

Standard Rules.

Let x = Total number of students in the School.
and y = Number of students admitted annually.

Where the instruction is a 4-year course it will generally be found that $x = 4\frac{1}{2}\,y$, and in a 5-year course that $x = 5\frac{1}{2}\,y$ or a little more. This allows for failures in examination and for some students abandoning the course. If these numbers are not approximately in this proportion, and a study of the tabulated statement will show that they are often not so, then there must be some other factor dislocating the proportion, such as an unusual admission number in one or more years, or an exceptional number of students abandoning a medical career.

(*i*) The sanctioned number of beds in the hospital or hospitals, including special departments, should be not less than $5\frac{1}{2}$ times y.
(*ii*) The number of beds in the hospital should be not less than x.
(*iii*) The daily average of in-patients should be not less than 5 times y.
(*iv*) The daily average of in-patients should be not less than x.
(*v*) The average annual number of confinements available for teaching students should be not less than 10 times y.
(*vi*) The number of microscopes available for teaching physiology should be not less than $4/3\ y$.
(*vii*) The number of microscopes available for teaching pathology should be not less than $5/4\ y$.

I will not stop to explain why I have fixed on these arbitrary numbers except to say they are the result of experience. I have fixed on the item of microscopes because they are the most expensive articles of equipment a student uses and they form a fair gauge of the general adequacy of laboratory education. I do not regard a microscope as fit for physiology teaching unless it has 2/3 and 1/6 objectives, nor for pathology teaching unless it has 1/12 oil immersion in addition to the other two. Deficiency in microscopes is the only item in which every medical school is below the standard of these Standard Rules and the real reason is the expense. The methods different schools employ to obviate this deficiency are numerous; the explanations given are, that the students do not require to prepare specimens themselves, but are shown those prepared by demonstrators; that the students do their practical classes in batches; that two or more students share one microscope; that microscopes are used in common between physiology and pathology; that microscopes are borrowed from the medical college. All these methods are unsatisfactory. A microscope is an individual article of equipment that should be in the care of one student during the course of the practical classes. Although no school attains what I consider the correct standard so far as microscopes are concerned, the deficiency of some schools is deplorable. How can School H with 50 students admitted annually teach pathology with only 4 microscopes and School I with 115 admissions with only 8 pathological microscopes? School K has only 5 and School L but 2, while School U has only 3 microscopes for physiology, and Schools X and Y have but 3 and 2 respectively for pathology. These are notable deficiencies.

My figures are still more arbitrary when I come to assess the numbers and qualifications of the various staffs and it should be recognised that I am but expressing a personal opinion based on the lists sent. I have taken 5 marks in each case as a maximum to represent adequacy of the numbers of staff allotted to teaching and clinical work, and to the special qualifications of the staff as a whole for the work they have to do. Obviously a paper estimate cannot be really satisfactory: and in assessing the arrangement of duties among a staff, usually inadequate in numbers, another 5 marks has been allotted. In some cases the teaching of more than one subject falls to one member of the staff, and we see such combinations as surgery and hygiene, anatomy and medical jurisprudence, gynæcology and ophthalmology, pathology and radiology. The assessment in this respect is therefore largely dependent on the number of staff available.

The percentage of marks necessary to obtain a pass varies in many schools in different examinations: so the figures here given are those of the final examinations only. Most schools have a 40 per cent. standard, and it is good to see that now there are more with a 50 per cent. standard than there are with only 33 per cent.

In assessing the adequacy of the methods for appointment of examiners, the appointment of external examiners, men of recent teaching experience, to examine in conjunction with the internal teachers, is considered satisfactory; while the appointment of the school's teachers alone, or in conjunction with local practitioners, who are not teachers, is considered unsatisfactory. A member of the staff of one school represented to me that examiners at one school should be appointed from among the staff of other schools and that by so doing knowledge of the conditions in different schools would be disseminated as well as the appointment of unbiassed examiners secured. This would certainly be a better method of appointment than that employed in his own school; but in most schools examiners are appointed by an Examining Board or by a Medical Faculty and the selection made is satisfactory.

The number of labour cases available for training students varies greatly with the different schools. Some of them have special maternity hospitals attached. Schools teaching women only are, as a rule, abundantly provided for: but some of the schools teaching both men and women cannot be teaching much practical midwifery to either sex. The hospitals attached to Schools C and L have only 14 and 9 labour cases in the year; but in most cases the deficiency is realised and the school authorities are doing their best to remedy this.

From what has been remarked above it is evident that the two principal defects in most medical schools are overcrowding and deficiency of equipment. If the communication of the few facts here given is held to be a step in the right direction and if further advance is considered feasible, the next step in such advance should be, in my opinion, a central and, so far as possible all-India meeting of representatives of the various schools and of their controlling bodies, Government and private.

PUBLIC HEALTH PROBLEMS AND INDIAN UNIVERSITIES

ANDHRA UNIVERSITY CONVOCATION ADDRESS

RAO BAHADUR T. S. TIRUMURTI, B.A., M.B. & C.M., D.T.M. & H.
Professor of Pathology, Medical College, Vizagapatam.

Mr. Chancellor, Ladies and Gentlemen,

I am very thankful to His Excellency the Chancellor for the high academic honour he has bestowed on me in asking me to deliver the Convocation address on the present occasion.

On previous occasions, such honour fell fittingly on the broad shoulders of renowned scientists, famous philosophers, great engineers, devout divines, legal luminaries, learned judges and able administrators.

I am somewhat surprised that a medical man should have been chosen on the present occasion. I take it to be the desire of His Excellency to give an opportunity to a member of every learned profession, so that academicians, the general public and the students, who take their degrees, may have some idea as to how the various problems connected with education and the welfare of the country are viewed from different angles by men of different professions. I consider that this gesture of his is of very happy augury, as it is an indication of how His Excellency will deal with the problems connected with this University, of which he is the Chancellor, and with the great and difficult problems of administration of this province, which he is called upon to solve taking into consideration different view points. I regard His Excellency's invitation to deliver this address as a compliment paid to the profession to which I have the privilege to belong. It is also a recognition of that important part of medical science—Pathology—which unravels the mysteries of disease processes and lays the foundation of the whole Science of Medicine, including Preventive Medicine.

There are only two professional colleges affiliated to this University, one of which, the Medical College, is located at the headquarters of the University. The College is older than the University.

A resolution was tabled at the last Senate meeting that the University should take over the control and management of the Medical College and the King George Hospital. The idea of the University administering a Medical College and the Hospital attached to it, though it is a natural growth in the progressive western countries, is not new even in India. There is the example of the Lucknow University. But the

University acted wisely by accepting the advice of our Surgeon-General, Sir Frank Connor, who, while sympathising with the aspirations of the University, cautioned us to defer the matter for the present and renew the application after the Government had spent the neecessary funds to improve the College and the Hospital, in pursuance of the recommendations of the Inspectors of the Medical Council of India.

It is well-known that the ruthless axe of retrenchment was levelled at the Vizagapatam Medical College a few years ago. But the catastrophe was prevented by the broad-based academic sympathy of the then Surgeon-General of Madras, Major-General C. A. F. Sprawson, who is now the Director-General of the Indian Medical Service, and the firm determination and vigilant care of our illustrious Pro-Chancellor, the Hon'ble the Rajah Saheb of Bobbili.

The stability of the Medical College was again threatened by the adverse report made by one of the Inspectors of the Medical Council of India, who recommended that the M.B., B.S. Degree of the Andhra University be not recognised for inclusion in Schedule I of the Indian Medical Council Act, as, in his opinion, the defects pointed out by him were of such a nature as to make the institution " insufficient." In his opinion, neither the College nor the Hospital was sufficiently equipped or sufficiently staffed. He observed that he saw no reason to assume that the Government of Madras, who are responsible for the maintenance of this College, would sanction sufficient funds to carry out the recommendations, because the repeated attempts, which had been previously made by the successive Principals, the Surgeon-General and the Minister-in-charge, had been without any success in the past. He felt certain that the Government would make no other answer than that previously given. Even if there be any change of heart, the proverbial delay of the Government in the carrying out of the recommendations would mean some years, and it was, therefore, unwise on the part of the Medical Council of India to recognise the M.B., B.S. Degree of this University.

Subsequent events have shown that prophecy is a risky game. At any rate, this prophecy has been falsified by the prompt action taken by our Chancellor, Lord Erskine, and his Government.

In consultation with the Principal, Major J. A. W. Ebden, and Sir S. Radhakrishnan, the Vice-Chancellor of this University, Sir Frank Connor, the Surgeon-General of our province, drew up a programme of improvements for the College and the Hospital as regards staff, equipment and buildings. Through the kind assistance of His Excellency's Government, a sum of Rs. 16 lakhs (non-recurring) is likely to be sanctioned to give effect to the complete scheme for the expansion, equipment and the re-organisation of the College and the Hospital and an additional sum of Rs. 1½ lakhs per annum towards recurring expenditure. To all those who have been responsible for bringing about this happy consummation, the Andhras will ever remain deeply grateful. We hope and pray that no future financial earthquakes will shake the stability of this really most useful institution, which has a great future before it in the prevention, cure and alleviation of human suffering, in the betterment of the health of the people of the Andhra Desa, and as a centre for higher medical education and medical research.

PUBLIC HEALTH—A STUDY IN CONTRAST.

It is very depressing but interesting to compare the progress made in Public Health during the last century of British administration in India and during the same period in England. It was only just one hundred years ago that the first steps were taken to organise public health measures in England. It is stated that the stimulus for this was an epidemic of cholera. Chadwick and Symon and the Victorian Sanitarians, who planned the main lines for the progress of public health, will ever be remembered. Compare the State Medicine of England which has become the all powerful social service organisation of that country to-day with our present position.

More than 16,000 medical men are in insurance practice; over 60 per cent. of expectant mothers are attended to in antenatal clinics; every year 40 per cent. of infants and children are looked after in child welfare centres; over 33 per cent. of school children receive medical inspection; 140,000 suspected cases of tuberculosis and their contacts receive attention from tuberculosis specialists; 98,000 persons are treated at the venereal clinics. There are over 180,000 hospital beds, excluding those in mental hospitals and more than twice this number are provided by voluntary oxrganisations. I leave you to compare these figures with those which can be gathered in a similar area of our country.

Again to quote Dr. Jameson's figures for England and Wales, more than £26 millions is spent annually on medical services by local authorities and over £31 millions on environmental sanitation, including housing.

What is the reason for this difference between the Public Health progress in England and India? In the opinion of General Megaw, who was the Director of the Calcutta School of Tropical Medicine and later D. G., I. M. S., in England sanitation has achieved its victories not merely by the preventive measures taken against disease but also because the public co-operated, and an improvement in the economic standards of living was taking place at the same time as the work of disease prevention, but in India the progress has been poor and this is due to " the new wine of scientific sanitation having been poured into old bottles of antiquated customs."

But General Megaw's reason by implication condemns the Indian people as a non-co-operating lot. But it is, however, gratifying to see his statement flatly contradicted by no less an authority than Col. W. G. King, the best part of whose service has been spent in laying the sound foundations of Public Health in this Presidency, which brought him into intimate contact with the people, that " the average educated Indian is not only capable of grasping the benefit of but of receiving, with very much gratitude, health education by practical demonstration of sanitary works of the community."

It cannot be doubted that education is the most desirable ally of sanitation, though it might be contended, not without some reason, that the educational policy has not pursued profitable paths and has, of late, been ploughing barren sands. This is realised by the Government and the people and has awakened them to a consciousness that all is not well with education in this country and that it needs a re-orientation and reform in all its branches.

A SHORT HISTORY OF PUBLIC HEALTH POLICY IN INDIA.

Col. King had rightly remarked that Politics cannot disregard Political Economy, nor Political Economy Sanitation—in its broadest sense—as applicable to man and beast and that, if sanitation be an integral part of politics, equally must laws be evolved for restraint of the selfish instincts of the individuals, which endanger the health of their neighbours, and their corollary multiples of communities and nations.

From the early days of the East India Company its administrative officers were provided with sanitary advisers. In 1859 a Royal Commission was appointed to enquire into the heavy mortality among the officers and ranks of the British and Indian troops. The Commission issued the report in 1863. In 1864 Sanitary Commissions were appointed for Madras, Bengal and Bombay. The Sanitary Commissioners of Madras and Bengal recommended the organisation of the Public Health Service. This was pigeon-holed with the remark that the funds must be provided by the Provincial Governments. The plea that education should precede sanitation was advanced. The Government considered it inadvisable to force public health on a population, that was resisting the innovation. It wanted to create goodwill by curing diseases and widening education to prepare, as it were, the ground on which the seeds of Public Health may be sown later.

In 1869 the appointment of the Sanitary Commissioner was transferred from the Military to the Civil Medical Department. A junior Army Medical Officer was considered enough and was subordinated to the Surgeon-General. Sometime later plague broke out and the Plague Commission, which was constituted to enquire into this disease, recommended a status of equality to the Sanitary Commissioner with that of the Surgeon-General, the Head of Curative Medicine. Subsequently, within a few years the Sanitary Commissioner was again thrust to a subordinate rank to the Surgeon-General. Later, his name was changed from that of the Sanitary Commissioner to that of Director of Public Health.

In 1889 the Madras University undertook to institute the qualification of Licenciate in Sanitary Science, which was later changed to Bachelor of Sanitary Science, a qualification equivalent to that of D.P.H. in Great Britain. Other Indian Universities followed the example of the Madras University. Civil Assistant Surgeons qualified themselves for degrees in Sanitary Science. Sanitary Inspectors were trained. At an earlier date Col. King recommended the utilisation of qualified men for Public Health work in Municipalities and District Boards. In those days the District Medical Officer was also the Sanitary Officer of the District. I have had the honour of being the District Medical and Sanitary Officer of one of the then biggest districts in the Presidency which was sometime ago bifurcated into two districts.

I can testify from experience that the District Medical and Sanitary Officer could not have carried out satisfactorily either his medical or his sanitary duties from the modern public-health point of view. He clamoured for separate assistance for the discharge of sanitary duties. Civil Assistant Surgeons were appointed as Sanitary Assistants. The Surgeon-General wanted that these men should be appointed by him and subject to his control and discipline. The District Board protested that he who paid the piper should have the right to call for the tune. The Sanitary Commissioner was a mere passive witness in this ugly squabble for power.

Later, the nucleus for a Public Health Service was laid; almost every Municipality and every District Board were compelled to have a medical officer with Public Health qualification to look after the Public Health of the local bodies concerned. These District Health Officers and Municipal Health Officers were placed under the Director of Public Health, who was also given a few assistants of the rank of Assistant Directors of Public Health. In this presidency our thanks are due to Col. Russell for the inauguration of the present well-planned scheme of public health service. Even here Madras took the lead.

It should, however, be acknowledged that public health appointments under Municipal and Local Boards were at the beginning not attractive. Even with additional encouragement, these appointments are not eagerly sought; but they are taken up, because better openings for service are not available for qualified men. The report of the Ministry of Local Self-Government for 1921 contains the following statements:—" The reluctance of professional men to accept service under Municipal Council is a menace to the future of sanitation of this Presidency......... Even men qualified as sanitary inspectors avoid service under local bodies, if they can get other employment." Things have improved since, but the improvement is due to unemployment and the overcrowding of the professions.

IMPORTANCE OF PREVENTIVE MEDICINE

We must reckon with the fact that ' Preventive Medicine ' has come to occupy a higher place than that of ' Bottle Medicine.' In the Dictionary Medicine is defined as " the art of curing, preventing and alleviating disease.". This is due to a general realisation that the physician should be equally interested in both Curative and Preventive Medicine. The efforts of such eminent persons as Dr. Jameson, Col. King, General Megaw, Col. Russell and others should be augmented by the other members of the services, the profession and from among the public, interested in Public Health work, by the insistence on the fact that the most essential factor in the development of Public Health in India is the question of cost. To the question of Sir William Osler why malaria should not be stamped out of India as it was done in Panama, Sir Leonard Rogers is reported to have pointed out the impossibility of such an improvement, because in most Municipalities in India the whole of the work—teaching, hospitals, schools, roads, sanitation—had to be paid for out of an income of 2 or 3 shillings per head of the population.

A healthy nation is largely a question of money. Health has to be purchased with money. Like all other good things it cannot be had for the mere asking. A nation must be healthy to become wealthy and it is only wealthy nations that have attained to high standards of health. Judicious expenditure of wealth can create health. The absence of health inevitably leads to absence of wealth of the nation as of the individual. Every one should remember that the "first wealth is health," and that " within human limits health is purchasable by communities."

I earnestly hope that the truth of Col. Russell's statement, that in no sphere of human activity can richer dividends be earned than by judicious investment in the preservation and promotion of the health of the people, will be fully understood.

Cruel catastrophies, harrowing horrors of famines and highly sponsored appeals for the treatment of the sick have proved successful in arousing public sympathy and in the collection of the necessary funds. But the voice of the appeal of Preventive Medicine seems to be a cry in the wilderness. Philanthropists have come forward to endow beds or build wards or dispensaries but I am yet to hear of a single endowment by any one in this country for an Institute of Preventive Medicine, the services of which are non-spectacular. Preventive Medicine, though despised to-day in India, will be enthroned in its proper place to-morrow. Our philanthropists will, I hope, bear in their mind the saying of Sydenham that the effect, even the slightest reduction in the incidence of sickness, suffering and death, must always be a matter of greater felicity than the riches of a Tantalus or a Crœsus.

Lt.-Col. H. E. Shortt, Director of the King Institute, Guindy, in his address to the Rotarians in Madras last August, is reported to have suggested that the funds provided for higher education, *i.e.*, the amount expended on Universities, may be diverted to the promotion of the physical well-being of the people, by which he means endowments for Medical Research. I do not consider that this suggestion will find favour. There is no doubt about the need for the re-orientation of University Education with the object of introducing useful reforms in it. But the mere diversion of a part of the amount now allotted to the Universities to the Public Health Department will only starve both the Universities and the Health Department. I, however, agree with him that the University Education, which is mostly of an academic nature, is being poured in many cases into bodies physically ill-equipped. The poor physic of our University students has been repeatedly pointed out in the reports of the Medical Inspections of University students in different parts of India.

I have been myself an eye witness to the haggard look, bent back, sunken eyes, emaciated frame and other signs of poor physic of the graduates, who come up in the variegated colours of their academic robes in an impressive procession to bow before the Chancellor and take their degrees. The convocation function, which ought to leave a happy buoyant feeling, has often given me a sense of depression, not only due to the doubts as to the capacity of the graduates to keep their heads above water in the sea of unemployment, into which they are driven from the portals of this University, but also to the melancholy prognosis, that the large majority of them are physically unfit to weather the cruel storms of many diseases, which abound in their neighbourhood.

NUTRITION

During recent years a remarkable advance has been made in the Science of Nutrition which has resulted in a re-orientation of Public Health problems. Public Health work is not merely the control of diseases from spreading and the defending of people against attacks of disease but it aims also to create a maximum physical well-being. Nutrition plays a very important part in increasing the stamina and vitality of the nation.

This science of nutrition is slowly changing the dietetic habits of the people. In the industrial wealthy countries the old bulky predominantly starchy diets are giving place to lighter but balanced diets, richer in animal proteins. We find an increased consumption of milk, butter, cheese and other dairy products, sugar, eggs, fruits and green vegetables.

Increasing attention is being paid to food production and distribution. People are realising that the world's food production can be increased many times without increasing the area of cultivation, if only they make use of the available scientific knowledge to the fullest extent. Have not engineering and biological sciences ridden certain parts of the world of malaria and other deadly diseases, which prevented men from going there and cultivating the soil and turned dreary deserts and sickly swamps into fertile fields and green pastures and vegetable and fruit gardens?

There are those who deplore a Nation's adopting a policy of economic nationalism and aiming at the ideal of economic self-sufficiency by the barriers of customs and high tariffs against the import of foodstuffs. But the fact remains that this spirit of economic nationalism is rapidly spreading.

Poor nutrition lowers vitality and leads to disease; and disease in turn to the poverty of the people. Higher wages need not necessarily lead to better nutrition. Popular education in the science of nutrition, however elementary it may be, is very necessary for the well-being of the people. The attention paid to nutrition, even in the curriculum of medical studies, is inadequate at present. It is very satisfactory to note that the small book on the 'Elements of Nutrition' by Col. McCarrison is being more widely read, by being translated into the vernaculars of this Presidency. There is also a Department of Nutrition in the All-India Institute of Hygiene and Public Health, Calcutta. Post-graduate students who take a course in Public Health will in future study the science of nutrition. The nutrition laboratory at Coonoor is serving a very useful purpose in undertaking research in nutrition and is under the management of the Indian Research Fund Association.

It is hardly necessary for me to say that the first help to the Nutrition Laboratory, Coonoor, came from this part of the country, from the Rajahsaheb of Parlakimedi who, by a princely endowment of a lakh of rupees, has given a great impetus to research in nutrition, thereby drawing the attention of other Zamindars, Rajahs and Maharajahs to the importance of this new science of nutrition and giving a lead to them to help this Public Health cause.

In Japan and Soviet Russia, Nutrition Institutes are connected with the State Departments of Public Health and with the Universities. The American

Dietetic Association has a large body of nearly 3,000 members. It is recommended that a chair for Dietetics should be created in each of the medical schools and colleges. It would be to the advantage of both research work in nutrition and the teaching of the subject to medical students and others, interested in the science, by the specialists attached to the nutrition laboratories, if the laboratories are shifted from Coonoor to Madras or to Vizagapatam. A Nutrition Institute has been recommended to be erected and endowed and if this fructifies, I hope it will not be located in a place, that is not a University centre with medical colleges and hospitals. In such a centre there is the additional advantage of an intellectual contact between the nutrition specialists and other scientists, whose collaboration would be of immense value and whose work may be correlated with the rest of the Science of Public Health.

The value of teaching elementary principles of nutrition and simple rules in regard to diet is recognised in other countries. In Boston and other parts of America there are Nutrition Classes. There are five Nutrition Clinics in London. The Department of Agriculture in U. S. A. disseminates information on nutrition and rational diet among the people. The importance of publicity and propaganda is well recognised.

Dr. Aykroyd, the Director of the Nutrition Laboratories, Coonoor, has drawn our attention to the urgent need in this country for a detailed enquiry into the dietetic habits of the people in the different provinces, and into the prevalence of food deficiency diseases. I hope the necessary financial aid for this investigation will be forthcoming and the enquiry commenced very soon.

The League of Nations Health Organization has in view the constitution of a permanent Commission to study the problems of nutrition in the proposed International Institute of Nutrition. The general problem of nutrition to-day is the need for the harmonising of Economic and Public Health Development. I believe the different aspects of the problem can be better tackled by shifting the Nutrition Laboratories from Coonoor to Madras.

The report of the Director of the I. L. O. at the 19th Session of the International Labour Conference in June last, has drawn attention to the relationship between adequate consumption and a proper standard of healthy living. The fact that large masses of people are at present underfed or malfed is not open to dispute. The foundation of a reasonable existence should be that amount of wages which would enable the worker to obtain a minimum of healthy diet for himself and his family and a healthy shelter for them. The report also states: "No one can doubt that there is immense scope—nay urge, urgent need—for the increasing consumption of most kinds of fruits for almost every country in the world." Increase in consumption would go to solve the agricultural problem and also to improve health, so as to reduce the budget expenditure of Government on medical aid. The increased efficiency of the population would increase the production of wealth and stabilise political conditions and solve to a great extent the difficult problems of unemployment.

Especially in our country poverty is the most important factor which has to be considered in the solution of the food problems. We cannot raise the purchasing capacity of the people without exploiting the internal market of the country more intensively and also the external market, if possible, thereby effecting a marked rise in the level of agricultural prices. Countries which have no natural conditions for the production of all their food requirements cannot aim at the ideal of self-sufficiency in the matter of food-stuffs. But it is generally held and supported by authoritative opinion that India, which has an infinite variety of soil, climate and other natural resources, need hardly go beyond her boundaries to produce a sufficiency of food-stuffs, to give an adequate and well-balanced dietary to the whole nation.

HEALTH AND HYGIENE

"Neither Æsculapius nor his daughter, Hygeia, is represented as in tears, with the habiliments of mourning; but instead Æsculapius is armed with serpents, the symbol of wisdom and convalescence; and Hygeia is bestowing warmth and succor:—Beautiful symbols of Health and Preventive Medicine." (Dr. D. W. Cathell, M.D.).

"With health everything is a source of pleasure; without it, nothing else, whatever it may be, is enjoyable. It follows that the greatest of follies is to sacrifice health for any other kind of happiness, whatever it may be, for gain, advancement, learning, or fame, let alone, then, for fleeting sensual pleasures." (Schopenhauer).

Lost stamina and lost health make for poverty. Political power, economic progress, educational advancement, scientific research, industrial expansion—in fact, even good habits and noble aspirations, cannot be got by mere chance. Hygiene plays an essential part in the rearing and maintaining of a healthy Nation.

All religions tell us that it is a sin to foul the mind or contaminate the soul. Does it not also teach us that it is also a sin to defile the body?

What is the use of holding Health Exhibitions which have degenerated into an annual *tamasha*, whose effect is of ephemeral nature? The 'Gospel of Health' has to be preached in a sustained manner every day in the year and a Health Museum should be opened, at least one in every district, to which a permanent staff should be attached for publicity and propaganda. This 'Temple of Hygeia' should be so built as to attract the people of the district to go on a pilgrimage for worship to be blessed with the knowledge of how to secure and keep health for themselves.

There is such a thing as Physical Morality. It is not only a duty to one's own self but also to his neighbours, the community, and the nation and also to other nations and future generations.

Democritus said "If the body and soul were to sue each other for damages, it would be a question, whether the landlord or the guest were more to blame."

' Dynamics of Health ' is the Science of Health. Health is never static. It is a constantly changing dynamic force. Good health gives vitality, vigour and vim. A realisation, that health is a dynamic progressive force and that vitality is the inherent, latent doctor in us, which resists disease or makes us get well quick, should engender in us the desire to foster health and to study Hygiene, which teaches us how to get and keep health.

Man's transgressions of the Laws of Health are not forgiven. Diseases have been compared to thieves and murderers, and the Preventive Medicine of the present day recognises that it is far more sensible to employ Scotland Yard Detective to track the Criminals of Disease than to employ an Army of Doctors for the cure of the same. "Prevention is better than cure" has become well-worn by repetition. But it is worth repeating, until such knowledge leads to action. There is only one inebriety, which, instead of being censured, can be commended and that is the intoxication with the 'Joys of Health.'

To the question which may reasonably be put to me, why I should talk to you about 'Health' on the present occasion, which was not expected to be used for a health talk or for propagandist purposes of the Health League, my reply is that it is not realised how all this propaganda is wasted, so long as Hygiene does not form an essential part of the school curriculum in all its stages. Graded courses in Hygiene, which is after all the most important subject from the personal and community points of view of healthy living, should be prescribed in all the classes, right up at least to the Matriculation standard.

" *Mens sana in corpore sano.*" " A healthy mind in a healthy body" is a trite saying and a truism admitted by psychologists and psychiatrists. A healthy body is necessary, if the mind should be healthy. Unless the mind is healthy, good habits and good character cannot be formed. Persons without good character and conduct in life are a drag on and a danger to society. If we realise that the essential virtues can be fostered only by a healthy mind working in a healthy body, we will not lose any time to make Hygiene (including Mental Hygiene) a compulsory subject of the school and college curriculum. What availeth man, if he in the process of gaining wealth loses health of body, mind and soul?

I hope that Your Excellency's observation, during the recent Prize Distribution function of the Government College at Bangalore, would have obtained sufficient publicity already. But it is worth repeating, " Education does not merely mean stuffing one's brain with facts; it means that, in order to be able to use those facts, one must keep healthy, so that he may be able to make use in future life all the knowledge and learning that he may get, when he was at school or college." I wish that the above observation of Your Excellency is put up in bold blazened letters as the motto in every Educational Institution.

SANE OUTLOOK ON LIFE—MENTAL HYGIENE

In comparison with other progressive countries the position of India, from the public health point of view, is anything but satisfactory. Though the economic condition of the people has much to do with their state of health, the problem of tackling the deplorable state of health conditions cannot be solved by looking at it purely from the economic standpoint. It should be remembered that even in the western countries, where the economic position of common man is infinitely better than that which obtains in India, there is still plenty of misery of diverse kinds. But it should not, however, be lost sight of that a certain level of comfort is absolutely essential for healthful living.

It is not the multiplication of worldly goods and our wants which make for human happiness but human happiness depends to a considerable extent on a sane outlook on life, which can be brought about by what Everett Dean Martin calls " a liberal education." The creation and growth of a sane outlook on life is attempted in other countries which have scientifically planned their educational progress through the medium of Mental Hygiene Clinics and by the inclusion of Mental Hygiene as an important subject of study for a liberal education.

The three most important general objectives in education to-day are (1) the imparting of knowledge, (2) formation of good habits, and (3) teachings of wholesome attitudes to human environmental influences by the training of the primary human emotions. From the beginning the educational organisations have pursued the first objective only. The study of Psychology and its influence on education have resulted in a greater realisation of late of the importance of the formation of habits from the very early stages of a child's education. A man might have mastered Ethics and yet lead an immoral life or be a philosopher, whose Philosophy fails him in the hour of trial, or be a medical man who knows and preaches to others all the rules of good health but fails to make use of that knowledge with regard to his own health. There are many people who do not put the knowledge they have gained into the everyday life of the practical world. Knowledge by itself is useless, unless put into practice. It is being increasingly realised that formation of the health habits is more important than mere knowledge about health.

It is a sad commentary on our present day education that it does not aim at teaching the student how to live and in what the real happiness of life lies. It is Psychology again that has drawn our attention to the significance of the part played by the various human emotions in making living happy and successful. The answer to the question ' Is life worth living?' that it depends upon the liver is not only true physiologically but also psychologically. The training of the emotions to create wholesome attitudes and reactions to outside influences should be the third educational objective. Wholesome emotions are attempted to be strengthened and undesirable emotions weeded out in Mental Hygiene training.

The preaching of the ' Gospel of Mental Health ' is more necessary than the propaganda for compulsory physical education. It is no doubt true that body and mind react on each other but there is no use of a giant frame if it is to harbour a weak mind; far better a frail frame, which enshrines a strong and well-developed healthy mind. Emotional self-control, the cultivation of normal relations with one's neighbours and a knowledge of the real wholesome ' Philosophy of Life ' are a few of the many benefits, which can be derived by a comprehensive course in Mental Hygiene.

Prof. William McDougall has described that the heart of the human personality, its " cylinders," are the primary emotions as fear, anger, etc. If these are removed, we should be, mentally, like springless clocks or fireless steam engines. Mental Hygiene will help the individual to self-discipline and create in him the desire to subordinate the self and merge it in the larger interests of the "bigger self " *i.e.*, the community. In that sense is it not true that a man has to lose himself in order that he may find himself? If we search deeply, we will find that true happiness can result only from a well-integrated personality, which is able to respond successfully to the varying stimuli of painful or pleasurable nature, which impinge on the personality in daily life. The necessity, therefore, for self-discipline and for the development of certain higher and more ennobling interests beyond the daily struggle of "getting and spending " needs no advocacy.

It is the study of Philosophy that can enrich the soul and enlarge the mind and lead us to the acquisition of higher values in life. Philosophy is an important subject of study for a saner and healthier outlook on life. No person can be considered to have had a liberal education, if Philosophy did not form part of his studies. Philosophy should supplement Science (used in the ordinary sense) and Science should pervade Philosophy. It is in such happy embrace that real liberal education is born.

George Borrow (Lovengro) can so derive happiness from the blue sky and the changing effects of the seasons that he asks himself " Is it not worthwhile to live?" On the other hand to the vast majority of men Wordsworth's words are too true.—"The world is too much with us, getting and spending. We may waste our powers. Little we see in nature that is ours."

THE IMPORTANCE OF BIOLOGY AS A COMPULSORY STUDY.

The importance of the study of Biology is well recognised in Europe and in America where the subject forms a compulsory course for school-going students. In our country only the students, who choose Medicine or Agriculture as their vocation, appreciate that a sound biological knowledge stands them in good stead. I hope the defect that the Natural Sciences have not been introduced so far in the Andhra University College of Science would be noted and remedied at an early date. The teaching of Biology should be of a more practical nature including sufficient laboratory work and ample observations in the field. It is regretted that in the examination for the Intermediate there is no practical test even in the Physical Sciences. No examination in a science subject can be considered to be complete, unless the knowledge of the candidate is tested by an oral and a practical examination. It is probably to this kind of examination in theoretical knowledge that we owe the reputation of theoretical intellectuals which other nationals have given us.

Biology teaches what life is and how life's environment is constantly changing and how the organism reacts to such changes. It teaches the physical basis of living things and that division of labour is associated with specialisation of structure in the increasing complexity of animal and plant life in the course of its evolution. The student of the subject obtains also clear ideas regarding animal instincts, reflex actions, memory, intelligence, methods of growth and reproduction. On the basis of the above knowledge he obtains some idea of variation and heredity and a desire to study ' Eugenics,' which considers the well-being of the race.

The study of plants and animals in relation to human affairs and human progress, a knowledge of disease germs and defensive powers of the body against them and an appreciation of the remedial measures adopted in Public Health measures cannot fail to be of incalculable benefit to the student and to the country indirectly. Biological knowledge has evidently played a great part in raising the standard of living by increasing the ability to earn higher wages and creating ideal citizens, who are a source of strength to themselves and to the State.

Biology tells us that human race can be improved by good environment and by good education and that the belief " that truck horses will breed only truck horses, the trotting horses only trotting horses " should be given up.

Though even the desirability making Biology a compulsory subject of school education in India is being tardily admitted, there are not a few persons who even now doubt its value in the school curricula.

ADVICE TO STUDENTS.

It appears to be the practice to give some words of advice to the graduates of the year, when they assemble at the Convocation function to take their degrees. I do not propose to do anything of the kind. Youth is in revolt and resents advice. Such advice is construed to be gratuitous and may even be felt insulting. Advice not paid for is not valued. Respecting youth sentiment, I shall not bore you with what will be considered to be platitudes.

But, I shall be failing in my duty, if I fail to congratulate the graduates of the year on their success, as, otherwise, it may be considered to be ungentlemanly or bad manners on my part. I was hesitating at first whom I should congratulate—the successful graduates or the unsuccessful candidates. There is a pleasure in the enjoyment of the fruits of the chase. In the pursuit of knowledge those who had worked hard have secured success and possibly distinctions. I wish I do not mar their feelings of rejoicing in the slighest manner. In this world pleasures are so few and come so rare, but pain abounds and comes frequent.

But there is also pleasure in the mere chase, though it may have ended unfertile. If the unsuccessful students had been sincere in their attempts to obtain as much knowledge as they can absorb in the prescribed course of their studies, they need not consider that they had wasted their time. Let the failed candidate not get disheartened at his failure. Failures and obstacles exist only to be overcome. The failure should be an incentive to subsequent better planning and renewed and vigorous attack.

The best part of a man's life is the stage of his life as a student, as it is mostly pleasant and care-free in the corporate life of the residential students of a University. If you utilise fully the opportunities which are afforded to you to enlarge your mind, broaden your sympathies and increase your stock of ideas, you would not regret for having prolonged your stay in the University. You may congratulate yourself on the other hand on having postponed the evil day, when you have to solve your bread-winning problem.

Whereas, I have to sympathise with the winners, because the spectre of unemployment would have already begun to stare at them. They have to face and solve the problem courageously, honestly and in the best manner possible. They should not prostitute for base purposes or obtain employment by any pretext or false pretence to positions, to which they have not fitted themselves by the required training or take to a vocation, for which they have no aptitude.

SCOPE FOR HONORARY SERVICE.

But whether you get paid employment or not, the field for honorary service is extensive and rich in possibilities of achieving not only success in life, but also, a name and a fame. Ignorance and illiteracy, poverty and sickness, disunion and discord; discontent and disaffection, famine and floods and many more allied miseries clamantly call the youths of the country to render honorary service—youths who are bold and enthusiastic, intelligent and interested, skilled and trained, active and alert, disciplined and disinterested. These miseries and misfortunes challenge you to fight them. Will you take up the challenge?

THE CALL OF THE VILLAGE.

The villages are in mourning. The crying need of the villages is that you should go back to them. Their deserted and orphaned appearance and gradual decay are due to the depletion of the best energies and brains from their midst.

The professions are over-crowded in the urban areas. Independent practice in the learned professions has nearly reached the saturation point. The future of the graduates in the city looks gloomy. There is still some hope for them in the villages.

Medical graduates are settlting down in rural areas. Lawyers too can settle down in villages. They will be able to considerably lessen the expenses of the villagers by helping them in conveyancing, drawing up plaints, complaints and legal documents, for which the villagers have to travel long distances now to cities, where living and legal advice are costly.

There are many villages without schools. A small band of educated young men may combine to start a school and their work will not go unrewarded. We have known many instances in which foreign Missionaries started primary schools, worked them single-handed for many years and built up gradually big institutions with an efficient staff of enthusiastic teachers.

There is also scope for agricultural graduates and engineers in the rural reconstruction scheme. The vital needs of the villages are elementary education, good drinking water, good roads and medical aid. Development of rural industries requires the services of skilled technicians. It is to the proper working of the Rural Reconstruction Scheme that we should look to a partial solution of unemployment.

As for social service, in the working of the Village Panchayats, Co-operative Societies, Scout Movement, Red Cross Work, Harijan Uplift, Rural Reconstruction, etc., there is enough scope for the exercise of your intelligence and energy.

The foundations on which you can firmly build the New House of the Nation should be made up of Village Panchayats, Co-operative Movement, Rural Reconstruction, Harijan Uplift, Economic Nationalism and a Common Language. It is for each one of you to choose in which of the above works you can profitably help the construction of this great edifice and act accordingly in a deliberate and determined manner.

NOW OR NEVER.

Pandit S. V. Bhagavat Ratna explains to us the significance of " Now and Here " in the following sentences:—"If you are Master 'Here,' you are master 'Everywhere,' and your Mastery of 'Now' is an earnest of your Mastery of 'Eternity.' The more you make the most of 'Here and Now,' the greater are the chances of your attaining the Mastery of Life."

" Banking on ' To-morrows ' and ' Yesterdays ' betokens Bankruptcy of 'To-day.' So beware of speculating on them, lest they prove so many quagmires for the treader of To-day's dry land to be bogged in."

DIGNITY AND SIGNIFICANCE OF LIFE.

The stress of life and the reign of defeatist creeds are making for a mood of rebellion in the more active and of passive indifference in the quieter sections of the race. The old values are crumbling: The new ones are yet to be born. " We have neither immediate nor remote aims and in our soul there is a great empty space." Those words of Anton Tchehov are not entirely inapplicable to the state of mind of several young men all the world over. Into empty spaces anything might enter and spurious philosophy enters quicker. I want you young friends to resist the inflow of such ideas as would undermine the essential loyalties of life. Never listen to doctrines that would lessen in your eyes the dignity and significance of life. " Nothing lasts, so nothing matters " is a dangerous and pernicious idea, which would lead us back to the jungle. There are many things in life that matter; and they matter tremendously. May you all have the imagination and the understanding to think of life as " an elevated and lofty destiny," and whatever be the material success that you might be able to achieve, let it be said of all of you that you never let down the great traditions of civilization and learning.

RELIGION AND TRUE WORSHIP.

The Bishop of London has said " The Bible can and will help you. Do not look upon it as a book for only one day a week. Do not be ashamed to be seen reading it. Your life is judged by your daily actions. If the Bible only helps you to live more happily, in closer harmony with your fellows, surely the time you spend reading it will prove your greatest investment." The same may be said of Bhagavat Geeta, Koran and other great religious works.

In a lecture on ' Fundamentals of Hinduism ' Swami Siddeswarananda said that the mere offering of fruits, flowers, or chanting of hymns did not signify true worship. True worship is in the controlling of the vices, such as, lust, wrath, and hatred and in manifesting a feeling of kindness and affection towards every living thing.

Though intellectually a race is adult, morally and spiritually, the men may be still children. Do we not find men using their newly acquired knowledge to work desolation and death in their folly and fear and greed and pride? The greatness of religion depends on the scale of values, which the person professing that religion sets for himself and in what he believes.

In the worship of Saraswati, Durga and Lakshmi, the Hindus appear to have had a grand conception of Knowledge, Power and Wealth, personified by the respective goddesses. Knowledge is necessary for the acquisition of Power and without Power, Wealth cannot exist. Both Knowledge and Wealth appear to be necessary to maintain Power. In the picture of Mother Durga you will find Durga is supported on one side by Lakshmi, Goddess of Wealth, the symbol and spirit of economic and industrial life and activities of the nation; and on the other side, by Saraswati, the Goddess of Learning and Arts, the symbol and spirit of intellectual and æsthetic life and activities.

In this part of India, instead of Durga Puja the Hindus celebrate Ayudha Puja. The significance is the same. We worship our tools and trowels, sticks and swords, ploughs and pick-axes and machinery and motors, which, if you analyse, will be found to belong to two kinds, one beneficial and productive and the other deadly and destructive. Whether productive or destructive, they represent Power.

Are we the ' Slaves of Custom ' in the worship of these Goddesses? Do we understand the real meaning behind all this worship?—*Address delivered on the 28th November*, 1935.

ASSOCIATION NOTES

U. P. PROVINCIAL BRANCH

Copy of Resolution No. 2, passed at the open session of the Second U. P. Medical Conference, held at Cawnpore on 12th and 13th October, 1935.

(*a*) " Resolved that the considered opinion of this Conference regarding the rules for the Association of the Independent Medical practitioners in the work of the Government or the Local Board Hospitals Vide C. O. No. 2207/IX—322, dated 5th September, 1935, published in the U. P. Gazette dated 7th September, 1935 on page 346, part III is that they are most unsatisfactory and derogatory to the dignity of the independent practitioners and therefore reiterates its request that the Government be pleased to rescind them and frame new rules in consultation with the accredited representatives of the Indian Medical Association, U. P. Provincial Branch."

(*b*) " Resolved that this Conference recommends that the length of private practice, status in the profession and experience of the work should be the guiding principle in obtaining the appointments of honorary physicians and surgeons and that foreign qualifications of a general type should in no case be given a preference to Indian Medical qualifications unless there are special reasons to act otherwise."

* * *

The following is the Annual Report of the U. P. Provincial Branch for the year 1934—35 as submitted by Dr. Bhupal Singh, Honorary Provincial Secretary:

The U. P. Provincial Branch of the Indian Medical Association was brought into existence by Resolution No. 1 of the First U. P. Medical Conference held in Meerut on the 11th of October, 1934 with the following office-bearers:—

President—Dr. S. N. Sen (Cawnpore).

Vice-Presidents—Rai Bahadur Dr. R. N. Banerji (Allahabad), Dr. M. Atal (Lucknow), Dr. R. C. Mitter (Meerut).

Hon. Provincial Secretary—Dr. Bhupal Singh (Meerut).

Hon. Provincial Jt. Secretaries—Capt. R. N. Bose (Meerut), Capt. K. P. Bagchi (Agra), Dr. I. N. Saxena (Jhansi).

Hon. Treasurer—Capt. S. K. Choudhury (Benares).

The headquarters of the Provincial Branch were located at Meerut as the Hon. Provincial Secretary belonged to Meerut. Work was begun in right earnest with the organisation of an office with a part-time clerk. Thanks to the organising capacity of my colleague Capt. R. N. Bose, the Hon. Provincial Jt. Secretary at the headquarters that the office soon got into a regular working order which made it possible for us to approach our professional brethren in various parts of the Provinces and enlist their sympathies with the cause of the profession in U. P.

BRANCHES AND MEMBERSHIP

We began with 4 branches, viz., Allahabad, Benares, Cawnpore and Lucknow with a membership of 215 and 2 affiliated bodies—Bareilly and Meerut.

With the help of extensive correspondence and a few tours organised to come into personal touch with our professional brethren we were able to establish 19 new branches with a membership of 283 distributed as follows:—

1.	Agra	27
2.	Aligarh	11
3.	Ballia	11
4.	Bareilly	10
5.	Budaun	8
6.	Bulandshar	10
7.	Dehradun	11
8.	Etawah	14
9.	Ghazipur	16
10.	Gonda	6
11.	Hardwar	9
12.	Jhansi	18
13.	Khurja	7
14.	Meerut	47
15.	Moradabad	30
16.	Muzaffarnagore	15
17.	Nazibabad	7
18.	Saharanpur	9
19.	Shajahanpur	17

The membership of the old branches after readjustment comes to 213 distributed as follows:—

1.	Allahabad	68
2.	Benares	60
3.	Cawnpore	39
4.	Lucknow	46

So that at present we have 23 branches with a total membership of 496. To this we add two headquarter members which brings the total membership of the Provincial Branch to 498. This is after all not a mean achievement.

In establishing branches we have followed two main principles:—

(*a*) We have encouraged the formation of a branch even though the number of practitioners in the station was small even 5 or 6 rather than enlist them as headquarter members because the establishment of a branch resulted in the formation of a centre of activity and these branches tried to increase their number by enlisting practitioners in the neighbouring towns.

(*b*) We tried our best to bring together the independent practitioners and the Government medical officers because we firmly believe that there is no possible antagonism between these two classes of medical men except petty personal jealousy which can only be subdued by mutual contact. We found the Government medical officers fighting shy of the I. M. A. in the beginning and so we approached the Government to find out their attitude towards their officers joining the I. M. A. and the Government definitely said that their medical officers had not been prevented from joining any medical association. This made our task easier and I am glad to say that the response from Government medical officers was very encouraging and they form a very important section of the members of the I. M. A. in many branches.

In addition to forming all these branches we established contact with the following towns though we were not able to establish branches there for some reason or another. But the ground is prepared and we are confident that they will very soon come into the fold:—

Farrukhabad, Muttra, Mussoorie, Sitapur, Etawah, Hardoi, Roorkee, Basti and Nainital.

The following towns did not respond to our approaches at all:—

Fyzabad, Banda, Jaunpur, Gorakhpur and Mainpuri.

All this entailed a large amount of correspondence taxing our meagre finances a great deal and the paucity of funds came in our way of approaching our professional brethren in other towns.

PRESIDENT'S U. P. TOUR

While on the subject of the propaganda I would like to mention the tour which the President of the Indian Medical Association kindly undertook. He visited Cawnpore, Allahabad and Benares on the way to Behar and he helped in creating enthusiasm in the places he visited. He had drawn up a programme of visiting certain places. Lucknow, Bareilly, Moradabad, Agra, Muttra and Meerut on his return journey and in spite of short notice we had arranged for his reception by wire and we were all disappointed when we came to know that the tour had been postponed for the time being.

From my experience of work in U. P. I have come to the conclusion that the only successful means of enlisting members and establishing branches is becoming in personal touch with our medical brethren in different stations by organising tours and carrying the message to their very doors. The local difficulties can be explained and doubts removed by a little personal talk which no amount of correspondence can do. This requires time and money. We have to find these if we wish to organise the Provinces as they should be done.

PROVINCIAL COUNCIL

A provisional Provincial Council was formed under Resolution No. 11 of the 1st U. P. Medical Conference held at Meerut on 12th October, 1934, consisting of:—

(1) All the Office-bearers.
(2) Representatives of the following medical associations who had attended the Conference:—Meerut, Jhansi, Benares, Moradabad, Agra, Cawnpore, Aligarh, Mussoorie, Muzaffurnagore, Allahabad, Bareilly, and Shaharanpur.
(3) Five members residing near Headquarters elected at the Conference:—Dr. S. Halder, Dr. J. L. Caroli, Dr. Murari Lal, Dr. Imtiaz Ahmad Khan, Dr. K. N. Tandon.

Branches as they grew up were asked to elect their representatives to replace those provisionally taken. Some of the branches have not sent in the names of their representatives in spite of repeated reminders. The following members have been elected: (See Appendix No. 1).

Three meetings of the Provincial Council were held:—(1) The first meeting was held during the first U. P. Medical Conference at Meerut on 12th October, 1934 to elect the Working Committee.

(2) The second meeting was held at Delhi during the All-India Medical Conference on 26th December, 1934.

(3) The third meeting was held at Cawnpore on 21st April, 1935. The meetings were not well attended.

WORKING COMMITTEE

The U. P. Provincial Council at its meeting held at Meerut on 12th October, 1934 elected the following Working Committee to which it delegated its powers:—

Ex-Officio:—

1. President.
2. Vice-Presidents.
3. Hon. Provincial Secretary.
4. Hony. Provincial Jt. Secy. at Headquarters.

Elected Members:—

5. Dr. Kunj Behari Lal Varma.
6. Dr. S. Halder.
7. Dr. J. M. Caroli.
8. Dr. Hira Lal.

There were nine meetings of the Working Committee during the year under review.

FINANCES

The following provisional budget was adopted by the Working Committee in the beginning of the year:—

Income

Income	Rs.	500	0	0

Expenditure

Establishment	Rs.	180	0	0
Postage	,,	120	0	0
Printing	,,	50	0	0
Stationery	,,	50	0	0
Typewriter	,,	55	0	0
Miscellaneous	,,	45	0	0
Total	Rs.	500	0	0

Our financial position has been rather precarious and it has been difficult to make the two ends meet.

On the Income Side—

Subscription actually realised	Rs.	409	0	0
Subscription due from Allahabad	,,	68	0	0
Subscription due from Cawnpore	,,	5	0	0
Total	Rs.	482	0	0

On the Expenditure Side—

Amount actually paid:

Postage	Rs.	87	7	0
Stationery	,,	44	0	0
Establishment	,,	158	11	3
Printing	,,	38	12	0
Typewriter	,,	55	0	0
Bank Charges	,,	2	0	0
Miscellaneous	,,	5	4	6
Total	Rs.	421	3	9

Bill Outstandung "Printing" ...	Rs.	24	0	0
Bill Outstanding against Treasurer's Office ...	,,	15	4	3
	Rs.	39	4	3
Amount to be paid to Central Fund	,,	45	0	0
Total amount to pay	Rs.	84	4	3
We have in hand ...	Rs	32	12	3
Due from subscription ...	,,	73	0	0
Total after realisation	Rs.	105	12	3
Balance in case the arrears are realised	Rs.	21	8	0

As realisation of Rs. 73/- is certain, the branches being good pay-masters we can safely say that our financial condition is satisfactory. But in order to be able to do propaganda work more efficiently we want provision for more money. We are, therefore, putting up a proposal for a special fund for a good type-writer, a rotary, etc. If we can make some provision for travelling alowances we may be able to reach the distant corners of U. P. Once the Province is organised it will be quite easy to balance our budget with the income from membership subscription.

ACTION ON U. P. MEDICAL CONFERENCE RESOLUTIONS

Out of the resolutions of the First U. P. Medical Conference, the following required action to be taken:—

1. Resolution No. 4
2. Resolution No. 5
3. Resolution No. 6
4. Resolution No. 7
5. Resolution No. 8
6. Resolution No. 9
7. Resolution No. 10
8. Resolution No. 12.

Resolution No. 4 relates to amend Poison's Rules and it was duly communicated to the U. P. Government and important members of Legislative Council and U. P. Medical Council.

Resolution No. 5 relates to amendments to the U. P. Medical Act and was duly communicated to the U. P. Government and President, U. P. Medical Council.

Resolutions Nos. 6 & 7 relate to amendments to rules of I. M. A. as regards share of Provincial Branch out of the subscription of affiliated bodies and Life members. Dr. Bagchi was entrusted with putting these up before the Central Council at Delhi. Resolution No. 7 was adopted. No. 6 will be taken up this year.

Resolution No. 8 relates to drawing up a scheme about honorary physicians and surgeons in Government-aided hospitals and dispensaries. As this subject was going to be taken up by the deputation that was to wait on H. E. the Governor, it was decided to wait till the deputation had interviewed H. E. But this was refused. We were just considering the question when we learnt too late to send our suggestions that the scheme had been published in Government Gazette on 27th July, 1935, part II. Of course it is too much to expect the Government to send a copy of draft to the Secretary, U. P. Provincial Branch of I. M. A. as to use words of the Government " in view of the recent appearance of the U. P. Provincial Branch of I. M. A., the Governor acting with Ministers regrets that he is unable to regard it as a stable body," very likely the draft of rules is already passed by the Government. We have gone over the draft and find that a special attempt has been made in it to exclude physicians and surgeons of standing who have large experience for getting a chance of acting as honorary physician or surgeon at any hospital.

There are two classes differentiated :—

(*a*) Hony. physicians and surgeons of consultant status. These must possess higher qualifications as M.D., M.S., F.R.C.S., M.R.C.P. for ordinary and D.O., D.L.O., D.O.M.S., etc. for specialist appointment. Now, how many private practitioners come within this definition? Hardly half-a-dozen in the whole of U. P. so that the consultant status is practically denied to medical men with Indian degrees, whatever may be the length of practice or the reputation they have.

Hony. Medical Officers for out-patients only—These after 5 years' service as the Hony. Medical officers may be eligible for consultant appointments. This is enough to show the spirit in which the rules have been framed.

Resolution No. 9 relates to two representatives of the independent profession on the U. P. State Medical Faculty. These are being at present elected by the Provincial Services Association. Our legitimate demand has been turned down in the following words :—

" The Governor acting with his Ministers is unable as yet to regard it as a stable body or to consider its request to be allowed two elected representatives on the Governing Body of the United Provinces State Medical Faculty." It needs no comment.

Resolution No. 10 relates to privilege of representation on Municipal and District Boards to representatives of Medical Associations. This was also refused.

Resolution No. 12 relates to the deputation proposed by the 1st U. P. Medical Conference to wait on His Excellency the Governor and Hon'ble Minister to represent certain grievances of the Medical Profession in U. P. His Excellency wanted written statement of these grievances to decide if any advantage will be gained by receiving a deputation. We took lot of pains and spent lot of time to prepare a memorandum and sent it on. We got a reply that His Excellency regrets that he will not be able to receive the proposed deputation. We can only say that His Excellency was not well advised to refuse to receive the deputation.

The above replies indicate Government's attitude clearly and the only reply we should give is that we should increase our membership to as large a figure as possible—enlisting every medical man in the Provinces as a member of I. M. A. The Government must be made to feel our strength and then only will it be able to give proper consideration to our just grievances.

AMENDED POISONS' RULES

My report will not be complete if I do not give you what we have been doing to fight the amendments to the Poisons Rules as the question really took up most of the time of the Provincial Council. As I have said above we tried to approach His Excellency the Governor and the Hon'ble Minister but we could not succeed. We then approached the M. L. C.'s and have succeeded so far that we expect them to take some action in the next session of the Council. We also approached the M. L. A.'s because the Poisons Act is a Government of India Act and so could be taken cognizance of by the Assembly. Certain questions have been sent in but have not been answered yet. The sky is still dark but we should not lose courage. As our cause is just and we must therefore succeed. Medical practitioners are exempt under Section 9 (1) of Poisons' Act. The working of this Section are so definite " Nothing in this Act or any rules made thereunder shall extend to or interfere with anything done in good faith in the exercise of his profession by a medical practitioner." Any rules which go against the spirit of this Section are *ultra vires*. This is our position to put it in a nutshell.

CERTAIN SUGGESTIONS

(1) I find certain branches have fixed their subscription at a certain figure and charge Rs. 3/- per head extra as subscription to the Central Association. This is irregular as Rs. 3/- per head per year is a charge on the Association and not individual members. The result is that those members who do not pay extra Rs. 3/- are kept out of membership of I. M. A. You may fix your subscription at whatever figure you like but pay Rs. 3/- per head from your collections.

(2) Certain branches have enlisted only 10 members as members of I. M. A.—the minimum which gives right of representation to Central and Provincial Councils and keep others as their local members. They take advantages of rule 7 (b) which says " Branch Associations are free to enrol members paying subscription according to denomination fixed by the branch. But only those members on whose behalf Rs. 3/- per head is paid will be member of I. M. A." This is only to provide for conscientious objectors. You cannot make I. M. A. a strong body in India, if branches follow this narrow policy. Our effort should be to enlist every body as member of I. M. A. and then only the voice of I. M. A. will be effective.

(3) There is a misunderstanding that a branch cannot be started unless there are 10 members in a station. This is a wrong interpretation of the rules. All that it means is that a branch having 10 members can have representation on the Central Council. But a branch can be opened even with less than 10 members and we have 6 such branches.

CONCLUSION

In conclusion I would take this opportunity of putting on record my gratefulness to my colleagues for the free and full co-operation that I had from them. I would also like to thank the various branches for the ungrudging support that they gave. I would also record my appreciation for the ungrudging work of our clerk Mr. Jag Mohan Prakash.

Appendix

Members of the Provincial Council of I. M. A. (1934-35)—

EX-OFFICIO :—

President—Dr. S. N. Sen, Cawnpore.

Vice-Presidents—Dr. R. N. Banerji, Allahabad, Dr. M. Atal, Lucknow, Dr. R. C. Mitter, Meerut.

Provincial Secretary—Dr. Bhupal Singh, Meerut.

Prov. Jt Secretaries—Dr. K. P. Bagchi, Agra, Dr. I. N. Saxena, Saharanpur, Dr. R. N. Bose, Meerut.

Provincial Treasurer—Dr. S. K. Choudhuri, Benares.

Additional Members—Dr. D. S. Halder, Muzaffarnagar, Dr. J. L. Caroli, Meerut, Dr. Murari Lal, Meerut, Dr. Intiaz Ahmad Khan, Meerut, Dr. K. N. Tandon, Meerut.

Meerut Branch—Dr. Hira Lal, Dr. Kunj Behari Lal Varma.

Jhansi Branch—Dr. Mohan Lal Mehra.

Benares Branch—Dr. S. Lahiri, Dr. B. N. Bhattacharya, Dr. M. A. Nomani.

Moradabad Branch—Dr. K. B. Dikshit, Dr. B. N. Sharma.

Aligarh Branch—Dr. Chand Behari Lal.

Muzaffarnagar Branch—Dr. Babu Ramgarm.

Etawah Branch—Dr. B. N. Mehrotra.

Cawnpore Branch—Dr. S. N. Misra, Dr. T. Caul, Dr. Hulas Rai.

Bullandshahr Branch—Dr. Rattan Lal Khanjee.

Agra Branch—Dr. H. S. Clive, Dr. G. P. Kapoor.

Ballia Branch—Dr. P. K. Chatterji.

Allahabad Branch—Dr. S. C. Basu, Dr. S. N. Kaul.

Ghazipur Branch—Dr. H. P. Tiwari.

Shahjahanpur Branch—Dr. S. R. Seth.

INDIAN MEDICAL ASSOCIATION

U. P. Provincial Branch

Meerut

Statement of Receipts and Expenditures for the year 1934—35 (14th October, 1934 to 30th Semtember, 1935).

RECEIPTS	Amount Rs.	As.	P.	Total Rs.	As.	P.
Jhansi Branch ...	45	0	0			
Aligarh Branch ...	33	0	0			
Saharanpur Branch ...	27	0	0			
Muzaffarnagar Branch ...	45	0	0			
Meerut Branch ...	133	8	0			
Hardwar Branch ...	27	0	0			
Moradabad Branch ...	90	0	0			
Etawah Branch ...	42	0	0			
Agra Branch ...	81	0	0			
Cawnpore Branch ...	34	0	0			
Bulandshaher Branch ...	30	0	0			
Ballia Branch ...	33	0	0			
Bareilly Branch ...	33	0	0			
Khurja Branch ...	10	8	0			
Ghazipur Branch ...	48	0	0			
Dehradun Branch ...	18	0	0			
Gonda Branch ...	9	0	0			
Sahajahanpur Branch ...	25	0	0			
Benares Branch ...	133	8	0			
Budaun Branch ...	12	0	0			
Nazibabad Branch ...	10	8	0			
Lucknow Branch ...	138	0	0			
Headquarter members ...	24	0	0			
Total				1,079	8	0

EXPENDITURE	Amount Rs.	As.	P.	Total Rs.	As.	P.
To Central Fund—						
Jhansi Branch ...	24	0	0			
Aligarh Branch ...	22	0	0			
Saharanpur Branch ...	18	0	0			
Muzaffarnagar Branch ...	30	0	0			
Meerut Branch ...	88	0	0			
Hardwar Branch ...	18	0	0			
Moradabad Branch ...	60	0	0			
Etawah Branch ...	24	0	0			
Agra Branch ...	54	0	0			
Bulandshahar Branch ...	20	0	0			
Ballia Branch ...	22	0	0			
Bareilly Branch ...	20	0	0			
Khurja Branch ...	7	0	0			
Ghazipur Branch ...	32	0	0			
Dehra Dun Branch ...	11	0	0			
Gonda Branch ...	5	0	0			
Benares Branch ...	74	0	0			
Lucknow Branch ...	92	0	0			
Headquarter Members ...	4	0	0	625	8	0
To Postage and Telegrams	87	7	0			
To Stationery ...	44	1	0			
To Establishment ...	158	11	3			
To Printing ...	38	12	0			
To Typewriter ...	55	0	0			
To Bank Charges ...	2	0	0			
To Miscellaneous ...	35	4	6			
With Hony. Treasurer, Benares, in Allahabad Bank ...	11	0	0			
To Cash in Hand— With Hony. Secretary on 1st October, 1935 ...	21	12	3	454	0	0
Total Rs.	1079	8	0	1079	8	0

Capt. R. N. Bose, m.b.,
Hon. Provincial Jt. Secretary.

(Sd.) D. R. Ranjit Singh, Major,
President.

Passed by the Working Committee
K. B. L. Varma, l.m.p.,
Chairman.

8th October, 1935.

(Sd.) S. K. G. Chowdhury,
(Sd.) P. C. Dutt,
Auditors.

Statement of Assets and Liabilities (1934-35).

ASSETS	Rs.	As.	P.	Rs.	As.	P.	LIABILITIES	Rs.	As.	P.	Rs.	As.	P.
With Hony. Treasurer	11	0	0				*Central Fund ...	45	0	0			
With Hony. Secretary	21	12	3				Printing ...	24	0	0			
DEAD STOCK—							Treasurer's Bills ...	15	4	3			
Typewriter 55 0 0							Balance ...	71	0	0			
Less 10%													
Depreciation, etc. ...	49	8	0										
UNREALISED SUBSCRIPTION—													
Allahabad Branch ...	68	0	0										
Cawnpore Branch ...	5	0	0										
TOTAL Rs.	155	4	3				TOTAL Rs.	155	4	3			

Central Fund Liability.

	Rs.	As.	P.
Jhansi Branch ...	6	0	0
Shahjahanpur Branch	17	0	0
Budaun Branch ...	8	0	0
Meerut Branch ...	1	0	0
Etawah Branch ...	4	0	0
Dehra Dun Branch ...	1	0	0
Gonda Branch ...	1	0	0
Najibabad Branch ...	7	0	0
TOTAL Rs.	45	0	0

Passed by the Working Committee

K. B. L. VARMA, L.M.P.,
Chairman.

S. K. G. CHOWDHURY,
P. C. DUTTA,
Auditors.

9th October, 1935.

D. R. RANAJIT SINGH, Major,
President.

R. N. BOSE, Capt., M.B.,
Hony. Provincial Jt. Secretary.

AN APPEAL TO BRANCH MEMBERS

CAMP CAWNPORE

BRETHREN,

Money makes the mare go is a very old proverb. In the early days of the U. P. Provincial Branch of the Indian Medical Association, the work of organisation needs money which cannot be spared from the meagre income of the branch. We urgently require the following:—

1. A good typewriter.
2. A Rotary.
3. A whole-time clerk.
4. A Reserve Fund.

The Provincial Council has decided that an appeal be made for special funds to meet these expenses which come to about Rs. 1,500/-. We hope that our appeal will not go in vain and that members will be pleased to contribute liberally so that the message of the I. M. A. may reach the remotest corners of United Provinces and the whole Province may be organised into one whole.

BHUPAL SINGH, B.A., M.B.,
Honorary Provincial Secretary.

D. R. RANAJIT SINGH, MAJOR,
K. P. BAGCHI,
R. N. BOSE,
S. N. MISRA,
Provincial Jt. Secretaries.

MUZAFFARNAGAR MEDICAL ASSOCIATION

At the annual meeting of the Muzaffarnagar Medical Association the following were unanimously elected as office-bearers for the year 1935—36:—

Secretary—Dr. S. Halder, L.M.S.

Jt. Secretary & Auditor—Dr. R. S. Batra, M.B., B.S., D.P.H.

Representative to the Provincial Council—Dr. B. R. Garg, L.M.P.

Representative to the Central Council of I. M. A.—Dr. S. Halder.

Members of the Executive Committee—Secretary, Jt. Secretary, Dr. B. R. Garg, Dr. Safi Md. Faruqi, L.M.P., Dr. Vishnu Datt, M.B.B.S.

JUBBULPUR MEDICAL ASSOCIATION

At the Annual General Meeting of the Jubbulpore Medical Association held on the 20th October, 1935, the following office-bearers were elected for the year 1935—36:—

President—Dr. DaSilva.

Vice-Presidents—Dr. G. N. Harshey, Dr. Raghunath Prasad.

Secretary—Dr. G. G. Subhedar.

KARACHI MEDICAL ASSOCIATION

(Sind Provincial Branch of I. M. A.)

Tenth and Eleventh Annual Reports

The following constitute the Tenth & Eleventh Annual Reports of the Karachi Medical Association for the period ending 30th September, 1935 as presented by the Managing Committee:

The Managing Committee have great pleasure to place before you the X/XI Annual Reports together with the audited accounts of the Karachi Medical Association (Sind Provincial Branch of the Indian Medical Association) for your consideration and adoption. You will notice that the reports and accounts comprise a period from 1st January, 1934 to 30th September, 1935, hence the reports and accounts are for two years—1st January, 1934 to 30th September, 1934 and 1st October, 1934 to 30th September, 1935.

This change of year was imperative, as the Indian Medical Association had requested our Association, which is its Provincial Branch for Sind, to make this change to enable them to put the workings of its different branches before their Annual Conferences, which are generally held in December.

1. The Managing Committee regret that the Annual Report for the year 1-1-34 to 30-9-34 was not placed before the General Body Meeting owing to circumstances beyond control in that our hard working and enthusiastic Hon. Secretary Dr. R. A. Amesur had met with a serious accident necessitating his being laid up in bed for a very long time.

2. During the period, our Association suffered a serious and irrepairable loss by the death of one of our founders and the first President, Dr. V. E. Nazareth, M.D., F.R.C.S.E.

3. *Membership*:—During the years under report 13 new members joined, 7 resigned and 1 died. The total number on the roll on 30th September, 1935, was 43. It will be seen that the strength is on the increase. Had several members not left the place and resigned on that account, our strength would have been still higher.

4. *Meetings*:—22 meetings of the General Body and 3 meetings of the Managing Committee were held and the attendance at these meetings was always very encouraging.

5. *Lectures*:—The following lectures were delivered during the period for which our Association is thankful to the lecturers and we hope, the same interest will be taken by the members of the profession both in delivering and in attending the lectures. The lecture meetings as usual were very well attended and very keen interest was taken both by members and non-members. We issue printed invitations to all qualified medical persons in Karachi, irrespective of whether they are members or non-members, the main object being free exchange of knowledge amongst the members of the profession. We thank non-members for their participation in the professional debates and we hope that they would co-operate with us not only in joining our Association as members but also in uniting for strengthening the Indian Medical Association so that the profession may be enabled to achieve self-respect and rights as the Medical profession in other countries has achieved.

LECTURES

1. Artificial Pneumothorax by Dr. G. T. Wrench, M.D. (Lond.)
2. Debate on Meningitis.
3. Infantile Convulsions by Dr. N. V. Adalja.
4. Prevention and Detection of Tuberculosis through Hygiene and medical supervision of School Children by Dr. H. P. Billimoria, B.Hy., D.P.H., etc.
5. Debate on Medical Education in India.
6. Pyorrhœa, by Dr. Udharam Sada Rangani, M.B.B.S.

6. Irregularities of Heart by Dr. A. Karim, M.B.B.S.
8. Bacilluria by Dr. G. T. Wrench, M.D. (Lond.).
9. Recent Advances in the Treatment of Common Rectal Conditions by Dr. S. N. Mistri, F.R.C.S. (Eng.)
10. Auto-Vaccines and their use in Private Practice by Dr. L. C. Agarwal.
11. Pneumonias by Dr. G. T. Wrench, M.D. (Lond.).
12. Yellow Fever by Dr. H. P. Billimoria, B.HY. D.P.H.
13. Surgical Aspects of Diabetes by Dr. S. N. Mistri, F.R.C.S. (Eng.).

6. *Finances:*—The opening balance was Rs. 1518-14-11 and 1566-0-5 on 1st January, 1934 and 1st October, 1934 respectively and the closing balance was Rs. 1566-0-5 and Rs. 1990-14-8 on 30th September, 1934 and 30th September, 1935 respectively thus leaving a clear saving of Rs. 471-15-9 on 30th September, 1935. This amount could only be saved by the generosity of Dr. A. Said in giving his premises with lights free for the use of the Association.

7. *Periodicals:*—The following periodicals were subscribed during the period under report and were circulated amongst the members:

British Medical Journal.
American Journal of Obstetrics and Gynæcology.
Proceedings of the Royal Society of Medicine.
The Practitioner.
American Journal of Diseases of Children.
The Antiseptic.
Archives of Ophthalmology.
The Indian Journal of Medical Research.
Dental Cosmos.
Indian Medical Gazette (supplied free by Dr. A. Said).
Medical Digest.
Indian Journal of Venereal Diseases (supplied by Dr. U. B. Narayan Rao.

We thank Drs. A. Said and U. B. Narayan Rao for supplying these journals free for the use of the Association.

8. *Library:*—As usual we have been endeavouring to expand our small library. Our library, however, cannot be maintained to an up-to-date level unless a donor comes forward to assist us. Our Mother Association (Indian Medical Association) can assist us in this direction naturally by sending us some books which are received by them for review in the Association Journal. Our members can likewise present books to the library. This will make the members more enthusiastic and feel that the Mother Association is really helping them in ways more than one and is taking a keen interest in this branch which is very remote from the headquarters and requires fostering care. The following is the list of the books, which we have got in our library:—

Diseases of Infancy and Children by Holt, 9th Edition.
Diagnostic and Therapeutic Technic by Albert S. Morrow, 3rd Edition.
Medical Dictionary by Dorland, 15th Edition.
A Manual of Diet in Diabetes H. N. Chatterji, 1929.
Transactions of the Ophthalmic Society of the United Kingdom, 1929.
Transactions of the Ophthalmic Society of the United Kingdom, 1930.
A Handbook of Ocular Therapeutics by S. R. Gifford, 1932.
Gynæcology by Howard A. Kelly.
The Indian Materia Medica by K. M. Nandkarni.
British Pharmacopœia, 1932.
The Nature of Diseases, Part I, 1924. J. E. R. McDonagh, F.R.C.S.
The Nature of Diseases, Part II, 1927. J. E. R. McDonagh, F.R.C.S.
Cause of Cancer by Gye and Purdy.
Some famous Medical Trials by L. A. Parry, 1927.
Medical Annual, 1929 to 1935, 7 volumes.
An Introduction to Dermatology by Sir Norman Walker, 8th Edition.
Text-Book of Practical Therapeutics by Hare, 20th Edition.
Venereal Disease, its Prevention, Symptoms and Treatment. Wansey Baly, 3rd Edition.
Minutes of the Bombay Medical Council for 1926, 1929, 1930, 1931, 1932.
Practical Obstetrics by Tweedy, Wrench and Solomons.

9. *Quetta Earthquake Tragedy:*—During the period, a very serious earthquake happened at Quetta. No sooner this shocking news was received in Karachi, than a special relief train was sent to Quetta in which, two of our members, Dr. S. N. Mistri, F.R.C.S. (England) and Dr. J. T. Bhatt, M.B.B.S. (Bombay) proceeded at the risk of their lives. When the refugees were brought to Karachi, several members of our Association offered their services voluntarily to the authorities. The Association tender thanks to the members for the work done by them at the time of this calamity.

10. During the period under report, our Honorary Secretary, Dr. R. A. Amesur who was elected to the Bombay Medical Council through the support of Karachi Medical Association, moved the following resolutions in the Bombay Medical Council with a view to improving the status of profession and safeguarding the rights. Though the Bombay Medical Council which is more an official body than a representative body of the medical profession, accepted the

The following are the amendments moved by Dr. R. A. Amesur, in the Bombay Medical Council to amend the Bombay Medical Act shown in juxtaposition.

Present Act.	Amendments moved by Dr. R. A. Amesur.	Resolutions Passed by Bombay Medical Council.
Section 2 (2) (a)—President nominated by the Governor in Council.	Section 2 (2) (a)—A President who shall be elected by the Council.	Section 2 (2) (a)—A President who shall be elected by the Council every two years and a Vice-President who shall be similarly elected and hold office for two years, both being eligible for re-election.
Section 2 (2) (b)—Six members nominated by the Governor in Council.	Section 2 (2) (b)—Three members nominated by the Governor-in-Council.	That the words "six" in clause (b) and "two" in clause (d) of Section 2 (2) of the Act be replaced by the words "four" and "four" respectively.
Section 2 (2) (d)—Two members to be elected by the Medical Practitioners who are registered under this Act and who are not Graduates in Medicine or Surgery or Licentiates in Medicine or Licentiates in Medicine and Surgery of the University of Bombay.	Section 2 (2) (d)—Four members elected by the Medical practitioners registered under this Act, qualified from recognised Institutions in the Bombay Presidency other than those described in section 2 (2) (c).	
	Add Section 2 (2) (e)—Two members elected by Medical practitioners registered under this Act, other than those described in section 2 (2) (c) and 2 (2) (d).	
Section 5 (1)—The Medical Council shall appoint a Registrar and may from time to time grant leave to the Registrar and appoint a person to act in his place. Any order of the Medical Council appointing, granting leave to or dismissing a Registrar or appointing a person to act as a Registrar shall be subject to the previous approval of the Governor-in-Council. The Registrar and any person appointed to act as	Section 5 (1)—The Medical Council shall appoint a Registrar and may from time to time grant leave to the Registrar and appoint a person to act in his place. The Registrar and any person appointed to act as Registrar shall be paid by the Medical Council, such salary and allowances as they may from time to time determine. Any person duly appointed to	Dr. R. A. Amesur's amendment accepted by the Council.

Present Act.	Amendments moved by Dr. R. A. Amesur	Resolved by Bombay Medical Council.
Registrar shall be paid by the Medical Council such salary and allowances as they may from time to time determine. Any person duly appointed to act as Registrar shall be deemed to be Registrar for all the purposes of this Act.	act as Registrar shall be deemed to be Registrar for all purposes of this Act.	
Section 5 (2)—The Medical Council with the previous approval of the Governor-in-Council, may appoint such other officers or clerks as may be necessary for the proposes of this Act.	Section 5 (2)—The Medical Council may appoint such other officers or clerks as may be necessary for the purposes of this **Act.**	Sections 5 (5) and (2).—Only the word "previous" should be omitted from the section.
Section 6—The Registrar shall keep a registrar of medical practitioners in accordance with the provision of this Act. The registrar shall be kept in such form as the Governor-in-Council from time to time direct. The names, residence and qualifications of every person who is registered under this Act shall be entered in the register with the date on which each qualification was granted. It shall be duty of the Registrar under the orders of the Medical Council to keep the register correct and from time to time enter any necessary alterations in the addresses of persons registered and to enter any additional qualifications which any registered person may have obtained subsequently to his registration, and to erase the names of all registered persons who have died: provided that the *Governor-in-Council* may prescribe a fee for the entry of any additional qualification. To enable the Registrar duly to fulfill the duties imposed upon him it shall be lawful for him to write a letter to any registered person according to his address on the register to enquire whether he has ceased to practise or has changed his residence, and if no answer is returned to such letter within a period of six months from the sending of the letter, it shall be lawful to erase the name of such person from the register;	Section 6—The Registrar shall keep a register of medical practitioners in accordance with the provisions of this Act. The register shall be kept in such form as the Council from time to time directs. The names, residence and qualifications of every person who is registered under this Act shall be entered in the register with the date on which each qualification was granted. It shall be the duty of the Registrar under the orders of the Medical Council to keep the register correct and from time to time enter any alterations in the addresses of the persons registered and to enter any additional qualifications which any registered person may have obtained subsequent to his registration, and to erase the names of all registered persons who have died: provided that the *Council* may prescribe a fee for the entry of any additional qualification. To enable the Registrar to fulfill the duties imposed upon him it shall be lawful for him to write a letter to any registered person according to his address on the register to enquire whether he ceased to practise or has changed his residence, and if no answer is returned within a period of six months from the sending of the letter, it shall be lawful to erase the name of such persons from the register; provided that the same may be restored by	Dr. R. A. Amesur's amendment accepted by the Council.

Present Act.	Amendments moved by Dr. R. A. Amesur.	Resolved by Bombay Medical Council.
provided that the same may be restored by direction of the Medical Council if they think fit to make an order to that effect.	direction of the Medical Council if they think fit to make an order to that effect.	
Section 7 (1)—Every person for the time being registered under the Medical Acts shall be entitled to be registered under this Act free of charge on informing the Registrar of the date of his registration under the Medical Acts and giving a correct description of his qualifications with the dates on which they were granted.	Section 7 (1)—To be deleted.	Section 7 (1)—The suggestion to delete this should be omitted.
Section 19 (3)—It shall be lawful for the Governor-in-Council by notification in the Bombay Government Gazette to cancel any rule or regulation made under this Act.	Section 19 (3)—It shall be lawful for the Governor-in-Council, by notification in the Bombay Government Gazette, to cancel any rule or regulation made under this Act, *on being advised by the Council.*	Section 19 (3)—This should stand as it is, as the suggestion to amend it, as proposed by the mover, is superfluous.
2 This Council further recommends the Governor-in-Council to provide in the Bombay Act No. VI of 1912, as amended by various subsequent Bombay Acts, that no person, whose name is not borne on the Bombay Medical Register, shall practice allopathy medicine and any one found guilty of doing so, shall be punished by a fine to the extent of Rs. 100/- (one hundred) for the first offence and imprisonment for any subsequent offence for a term not exceeding six months.		Paragraph 2 of the Motion.—Government have no power under the Indian Medical Degrees Act or any other Act to make the amendment proposed in the Bombay Medical Act.

resolutions in a very narrow and reluctant manner and that too with curtailments, it is regrettable to note that the Bombay Government have refused to accept these amendments to the Bombay Act No. 6 of 1912. We hope the Indian Medical Association will take this matter up very seriously. It will be seen from the proceedings of the Bombay Medical Council that this Council has been only removing the names of members who are on its register for the professional misconduct, and not safeguarding their interests:—

11. Since the advent of the Bombay Medical Council in 1912, the Council never took an initiative to appoint "Visitors" which is obligatory duly under Rule III which runs as under:—

> "Under the powers conferred by Section 13 (b) of the Act, the Council *shall* from time to time appoint members of the Council as Visitors, who *shall* be deputed to attend and be present at such of the Professional Examinations required for obtaining qualifications of any of the Licencing Bodies as the Council may direct."

Our representative pressed hard and ultimately the Council passed a resolution and appointed visitors to visit L.C.P.S. examinations only. The Council refused to appoint visitors for university examinations. The report of the visitors regarding L.C.P.S. examinations showed that the teaching in the medical schools was not what it ought to be. Our Representative moved the following resolutions as will be seen from his letter, dated 9th August, 1935.

Letter dated 9th August, 1935, from Dr. R. A. Amesur, Rampart Row, Karachi, to the Registrar, Bombay Medical Council, Bombay:—

Under Rule 6 of the Rules and Regulations of the Bombay Medical Council, I shall move the following resolutions at the next meeting of the Bombay Medical Council to be held on 3rd September, 1935:—

(1) "That with a view to give proper training to students of the Government Medical Schools, *viz.* B. J. Medical Schools at Poona and Ahmedabad, and Medical School at Hyderabad (Sind), this Council recommends the Government of Bombay to create a separate cadre of teachers for these schools and appoint only those who have specialised in the subjects in which they have to teach, in view of the fact, that at present teachers are recruited from B. M. S., who have neither specialised in the subjects which they have to teach, nor have had teaching experience and thus cannot impart proper training. On account of the faulty training received under the present conditions, the medical students turned out by these institutions do not possess the required knowledge and efficiency."

(2) "That this Council recommends the Government to equip the Pathological Museums of the Government Medical Schools with up-to-date Physiological apparatuses, instruments and other materials, so as to afford full facilities to the students for a proper and thorough study of the subjects."

(3) "That this Council recommends the Government to provide up-to-date Museums in the Government Medical Schools for teaching practical Pharmacy and proper training in the handling and use of drugs."

The Council considered these resolutions for the creation of a separate cadre of teachers for the three Government Medical Schools in the Presidency and for the proper equipment of the laboratories and museums provided from them, and eventually decided to invite the attention of the Government (1) to the reports of the visitors appointed last year to visit the examinations for the L.C.P.S. and (2) to the necessity for the introduction of a special teaching cadre, better equipped laboratories and museums for certain departments of the Medical Schools.

12. In Christmas 1933, we extended an invitation to the Indian Medical Association to hold the All-India Medical Conference in Karachi in Christmas 1934, but the Conference was held at Delhi. We also invited them in 1934, our invitation was accepted but the next Conference will be held at Nagpur. Even though we were disappointed on two occasions, we again extend our hearty invitation to the Indian Medical Association to hold the Conference of 1936 at Karachi, and we hope that they will accept our invitation without reservation and hold the Conference of 1936 at Karachi.

13. The Association sincerely thank Dr. A. Said for his generous heartedness in giving his premises with lights free of cost for the use of the Association. But for this, our finances will not be as they are shown.

Our thanks are also due to our Honorary Treasurer Dr. N. V. Adalja and Honorary Auditor Dr. Hemandas Sada Rangani.

The Association place on record their high sense of appreciation of services rendered by their retiring President Dr. G. T. Wrench, M.D. (London). Being one of the founders and President of the Karachi Medical Association for the last eight years, he tried

APPENDIX A

Statement of Annual Accounts of the Karachi Medical Association from 1st January, 1934 to 30th September, 1934.

RECEIPTS.

	Rs.	A.	P.	Rs.	A.	P.
Balance B/F. as on 31-12-33						
Fixed Deposit with Bank ...	1,000	0	0			
Saving Bank Account	390	10	11			
Cash on Hand	128	4	0	1,518	14	11
Interest received on Saving Bank A/c.				5	3	0
Subscription realized from the members during the year ...				594	0	0
Total ...				2,118	1	11

EXPENDITURE.

	Rs.	A.	P.	Rs.	A.	P.
Salary to peon				225	0	0
Postage				1	5	0
Printing				29	8	0
Medical Journals				85	10	0
Medical Books				13	4	0
Annual Contribution to Indian Medical Association ...				83	4	0
Miscellaneous	107	14	6			
Cycle Repair	0	8	0			
Wreath to Late Dr. Nazareth ...	5	0	0			
Brasso	0	8	0			
Bank charges on Draft	0	4	0			
				114	2	6
Balance as on 30-9-34.						
Fixed Deposit	1,000	0	0			
Saving Bank A/c.	507	13	11			
Cash on hand	58	2	6			
				1,566	0	5
Total ...				2,118	1	11

Audited and found correct,
(Sd.) HEMANDAS FATEHCHAND,
Honorary Auditor.

Karachi,
9th November, 1936.

(Sd.) R. A. AMESUR,
Honorary Secretary.

(Sd.) N. V. ADALJA,
Honorary Treasurer.

APPENDIX B

Statement of Annual Account of the Karachi Medical Association from 1st October, 1934 to 30th September, 1935.

RECEIPTS.

	Rs.	A.	P.	Rs.	A.	P.
Balance B/F. as on 30th September 1934,—						
Fixed Deposit with Bank	1,000	0	0			
Saving Bank A/c.	507	13	11			
Cash on hand	58	2	6			
				1,566	0	5
Interest received on Saving Bank A/c.				14	15	0
Subscription realized from the members during the year (1-10-34 to 30-9-35)				861	0	0
Isterest received from F. D. ...				79	0	0
Amount recovered from peon paid to him in excess				25	0	0
Total ...				2,545	15	5

EXPENDITURE.

	Rs.	A.	P.	Rs.	A.	P.
Salary to Peon	295	0	0			
Postage	7	1	3			
Printing	39	14	0			
Medical Journals	165	1	3			
Medical Books	14	6	3			
Miscellaneous :—						
Cycle Repairs	13	10	0			
Deposit of Library returned ...	20	0	0			
				555	0	9
Balance C/O. as on 30-9-35 ...						
F. D. with the Mercantile Co-operative Bank Ltd. ...	1,079	0	0			
S. B. A/c. with Sind Provincial Co-operative Bank Ltd. ...	745	8	11			
Cash on hand	166	5	9			
				1,990	14	8
Total ...				2,545	15	8

Audited and found correct,
(Sd.) HEMANDAS FATEHCHAND,
Honorary Auditor.

Karachi,
9th November, 1936.

(Sd.) R. A. AMESUR,
Honorary Secretary.

(Sd.) N. V. ADALJA,
Honorary Treasurer.

his best for the unity of the Medical Profession. We hope his efforts will bear fruit in due course. Having had experience of professional unity in England, he very enthusiastically tried to see that the Indian Medical Profession achieved this success. Though he has retired from India, we are sure he will carry on his fight in England for the rights of Indian Medical Profession.

Further, we earnestly suggest to the Indian Medical Association to request Dr. G. T. Wrench to carry on the propaganda in England for the Indian Medical Association, as their representative.

The members of the Committee thank Dr. R. A. Amesur, and Dr. D. H. Jhalla, the Hon. Secretaries for the interest they have taken in the working of the Association at the cost of their valuable time.

* * * *

Karachi Medical Association gave an At Home to Dr. G. T. Wrench, M.D. (London), on the eve of his departure from Karachi, on 9th November, 1935, at 9 p.m. in the Association premises.

A large number of medical practitioners asembled to bid him farewell.

Dr. Bhatt, Vice-President:—Ladies and Gentlemen, Dr. Wrench is well-known to all of us. I need not say anything as regards his professional abilities and the interest he has taken in matters connected with our Association and our City. I do not desire to make a long speech, and on behalf of my Association and on my own behalf I wish him a bon-voyage and happy life.

(Dr. Wrench was then garlanded).

Dr. Rochiram A. Amesur:—Ladies and Gentlemen, As the Secretary of the Karachi Medical Association, I have been asked to say a few words by my colleagues, which I do with mingled feelings of pleasure and pain. Pain at the idea that Dr. Wrench, who has been the real founder of this Institution, who has nursed this Institution with very great care, at times carrying out the work as its President even to his detriment financially, since I can practically say that there was at a time boycott of consultation with him from certain sections, is leaving us at a time when this Association is still in its infancy and is not in a position to stand on its legs. I have been thinking and thinking hard whether this Institution can find a successor to Dr. Wrench, and I find the reply as yet in the negative.

Several things come to my mind at this time about Dr. Wrench. Ladies and Gentlemen, my Association with Dr. Wrench has been for the last twenty years, rather before he started practice in Karachi. When our profession was getting divided he came to our aid and he wanted to do away with the superiority and inferiority complex and tried his best to bring about a union in the Indian Medical Profession in Karachi. He had several talks with me that we should do something to this end and we started the Karachi Medical Association as the central organisation with a hope to start an Indian Medical Association, but as the profession here was divided, and before we could realise our dreams of making Karachi Medical Association as the central organisation of India, Calcutta stole a march over us and the Indian Medical Association was started there. Dr. Wrench tried his best to see that here in Karachi, unity was achieved so that the Indian Medical Profession could achieve what Great Britain has achieved, *viz.*, the doing away with the complexes. But I am grieved to see that it has not taken the shape of which he wanted, and I feel sure, ere long, in his retired life, he will come to know that whatever he has tried has come to stay in India through Karachi, that the unity of the profession has been achieved. To us, on the eve of separation of Sind as a province, Dr. Wrench's departure is a distinct loss, in that we are losing one of the best consultants, in whom we have trust, and it becomes hard for us to find out a person in his place to whom we can go, in whom the public and the patients can have so much faith. Dr. Wrench has been my colleague in his public life in the Municipal Corporation and what struck me most was that though we were poles asunder at the Corporation Hall, outside we were the greatest of friends, and it was because, for the sake of profession, Dr. Wrench would leave everything else outside.

Those of you, who might have attended the meetings of the Medical Association might have found how profound Dr. Wrench's knowledge has been in all subjects, whether in medical subjects or in any other subject. Every time we were putting him questions he was tackling them all patiently in a marvellous way, and I can tell you the secret of it lies in the fact that before he used to lecture or tackle any problem he used to study his work in hand thoroughly, so that as a President he could very well take part in the discussions and guide the deliberations successfully.

Gentlemen, I once again on behalf of the Karachi Medical Association, wish Dr. Wrench happy voyage and prosperous life, the life which I hope he will, with a true courage of an Englishman, devote to the country which has fed him, at least so far as the medical profession is concerned, having seen our sufferings. I wish him prosperity, that prosperity which will bring him contentment and true happiness, and lead him towards that ideal which he has been striving for.

Dr. Wrench, you have done your duty to the country. I find myself unable to express the surging emotions which I feel within at this parting and let me once more wish you a happy career.

Dr. G. T. Wrench:—Ladies and Gentlemen, Dr. Rochiram has said that I am going away after doing my duty to the country. Well, I want to say one thing—my true interest in India always rested, and will always rest, outside the cities, in trying to improve the conditions under which the peasantry lived and in enabling the facilities of modern medical profession reaching them whenever I could. Mr. Punniah sitting yonder, and Dr. Popatlal with his particular kind of hat, will agree with me that the heated city is a parasite, that cities lay a heavy weight on the suffering peasantry and that has always been my interest. I have said a good deal about the Indian peasantry and one of the first books, I desire to bring out will be " India from an Englishman's point of view," showing the predominant urban characteristics of modern civilisation. My sympathy is not entirely amongst the people with whom I lived but with the peasantry, I do hope that if people are going to talk about real service to India that should be carried out by a far greater consideration for the peasant.

From the little knowledge I have of the Sind Hari, I can say that the conditions of his life are far from being of service to India. The city people are far too proud to recognise this fact, because they consider they have a better intellect and are justified in plunging through their own affairs, while slowly the peasantry who supply the life blood themselves die under the soil. I may say that one of the disastrous effects of modern world is the very dominant character of civilisation in city matters. One of the tragic mistakes that has been made in the separation of Sind, is in not chosing an urban place for capital. You know Mustapha Kamal Pasha directly he had to establish a nation out of the great peasantry, he immediately removed the capital from Constantinople and took it far away into the land of the peasantry. No body on the Sind Administrative Committee, no journalists, I may say no leading politician here and elsewhere, no Commissioner of Sind has ever thought that we are to serve the peasantry of Sind and that it is ultimately from them that we get our living and that the capital should be as near the mass of peasantry as possible instead of at a place, though in the Sind itself, which is separated by a vast stretch of desert.

I do intend to utilise the little time I have to some useful activities as you would desire. I have collected a large number of statistics about not only India but of other countries, how destruction is being brought about because we are forgetting Mother Earth, is striking. I have often gone out to the deserts and it is pleasure to see what the soil is like. You will find that while lots of people drive out to Clifton and other places, only one single solitary man in the outskirts of our city, in the desert. I do not know what it is in upper Sind, but here it is terribly artificial. You remember the story of Hercules and his combat with the giant Antiochos. Hercules took Antiochos and flung him over his shoulders, but when Antiochos came in contact with Mother Earth he revived his strength, with the result that Hercules had finally to take him away from Mother Earth. That is what civilisation is doing, taking away people from Mother Earth and that is one of the disasters of present times.

I do not wish to say anything to the profession. But if I say anything to the profession I do hope that the Medical profession, in common with the other leaders of civilisation in the city, should pay great heed to this question concerning the peasantry. As a matter of fact our Association has done practically nothing. Little has been done by the Indian Medical Association and the peasant is entirely neglected. It is a pity that it is so, and one of the new plans which are before the Indian Medical Association is how to spread the effects of western medical culture on the suffering peasantry, in the villages, to stop some of the ravages of diseases affecting the peasantry. That is one of the problems which the Indian Medical Association is largely concerned with and thereby finding a way for the independent medical profession. It has also to think of India as a great peasantry and there is ample scope in the villages.

The whole of India seems to me at present, teeming and interesting possibilities and yet when all these great possibilities of service are at hand we are still in Karachi held by feud, differences that never ought to occur and these are my last words, that you should get over the differences, and pay attention to the peasantry of Sind.

I thank Dr. Rochiram very much and I want to be remembered about one thing and one of the duties of the profession is to *unite* because they have got to serve the people who are in the hinterland and they should not be Karachites. That is the most important point and if every one goes home with this particular idea, I have done a little service to India, to be remembered.

Three cheers were proposed for Dr. Wrench which were responded unanimously, and the meeting dispersed with shaking of hands between the guest and those present.

POONA BRANCH

The following is the Report of the Poona Branch of the I. M. A. for the year ending 30th September, 1935.

President—Khan Bahadur Dr. E. S. Bharucha, L.M. & S., F.C.P.S., B.M.S. (Retd.).

Vice-Presidents—Rao Bahadur Dr. R. K. Naidu, L.M. & S., Dr. V. D. Phatak, M.R.C.P., L.R.C.P.

Secretaries—Dr. N. L. Ranade, B.A., M.B.B.S., Dr. V. R. Dhamdhere, M.B.B.S.

Treasurer—Dr. V. R. Dhamdhere, M.B.B.S.

Managing Committee Members—Rao Bahadur Dr. N. R. Kulkarni, Capt., Dr. A. K. Nulkar, Dr. C. N. Chandrachud, Dr. V. M. Chitnis, Dr. M. N. Natu and Dr. V. A. Belzare.

Number of members on roll at the beginning of the year	47
Number of members on roll at the end of the year	46
Transfer of members to other branches, if any	nil.
Reduction of members by Resignations ...	1
Reduction of members by Removal ...	nil.
Reduction of members by Deaths ...	nil.
Number of new members enrolled during the year	nil.

Amount contributed to the Central Fund under Rule 7 (b)—Rs. 131-4-0.

ACTIVITIES OF THE BRANCH

Number of meetings held by Managing Committee	2
Number of meetings held by General Body	3
Number of Clinical Meetings	3

FINANCIAL STATEMENT. *From 1st October to 30th September, 1935.*

RECEIPTS		Rs.	As.	P.
Subscription for the current year ...		387	0	0
17 Members at the rate of Rs. 12/- per member ...	204 0 0			
17 Members at the rate of Rs. 9/- per member ...	153 0 0			
5 Members at the rate of Rs. 6/- per member ...	30 0 0			
Arrears received from members during the current year		81	0	0
Interest on current account ...		0	6	9
Amount received from the Laboratory Dept. for the last year ...		8	0	0
Amount received from the Laboratory Dept. for the current year ...		12	10	0
Total Receipts		489	0	9
Plus opening balance		411	13	7
Total ...		900	14	4

EXPENDITURE	Rs.	As.	P.
Affiliation fees	131	4	0
Salaries	72	0	0
Collection charges at Rs. 3/- per hundred	12	0	0
Printing & Stationery	10	4	0
Postage & Stamps	5	13	0
Donation to the Poona Seva Sadan Society	25	0	0
LIBRARY:			
Salaries for circulating Journals amongst members	60	0	0
Subscription to Journals for reading room	105	10	3
Travelling allowance paid to Dr. M. G. Oke to go to Delhi for Conference ...	46	0	0
Functions	12	6	0
Miscellaneous	4	0	0
Total Expenditure	484	5	3
By balance	416	9	1
Total ...	900	14	4

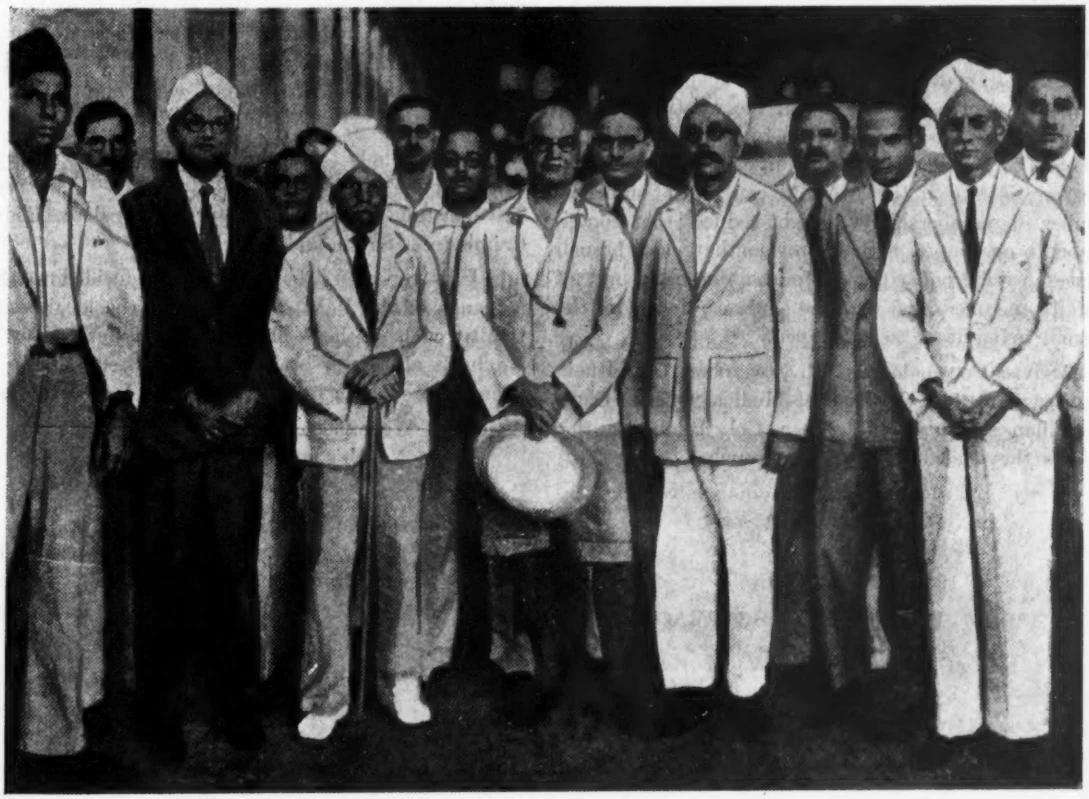
ORGANISATION OF THE MEDICAL PROFESSION IN INDIA

SECOND TOUR OF COL. BHOLA NAUTH, PRESIDENT, INDIAN MEDICAL ASSOCIATION

It will be remembered that after his tour in U. P., Bihar and Bengal in April and May, 1935 Col. Bhola Nauth again offered his services to the Indian Medical Association in conducting a further tour of South India where the Association was weakly represented. He originally intended to include this area in his former tour but illness prevented him from doing so. In preparation of the tour circular and personal letters were issued to various medical organisations and prominent men in the various districts which it was proposed that Col. Bhola Nauth should visit and the response received was most encouraging.

Col. Bhola Nauth left Lahore on the 8th November and broke journey at Cawnpore. He arrived at Calcutta on the 12th November. An At Home was given by the members of the Central Council resident in the headquarters and the members of the Executive Committee of the Bengal Branch.

Col. Bhola Nauth discussed the question of forming branches of I. M. A. in the provinces not included in his previous tour.



Col. Bhola Nauth, President, Indian Medical Association, was given a reception on his arrival at Central Station, Madras.

His first visit according to the itinerary was at *Cuttuck* on the 13th November. He was met by the medical men of the town at a tea party at the Orissa Medical School on the 14th and after a short discussion it was decided to form the Cuttuck Medical Association with a view to affiliate it to the I. M. A. The members of the staff of the Medical School were present at the meeting.

Berhampore. A reception was given by private medical practitioners association, Government servants being absent. After his address they resolved to convert their Association into a branch of I. M. A., Vizagapatam. An At Home was given by the local practitioners association. All the College staff who were Government servants including the District Medical officer were present. After his address they all decided to join the I. M. A. as a branch, officials and non-officials.

Vizianagram. Col. Bhola Nauth addressed a meeting. They resolved to form a branch.

Both at Vizag and Vizianagram the question of contribution to the Central Body loomed very large in post address discussions. Col. Bhola Nauth gave them no promise of reduction in the existing amount of contribution but advised them to join the I. M. A., and then to represent their difficulties. His own view, however, is that if the I. M. A. can enlist sufficient number of membership we might reduce the contribution to one rupee with a proviso that each branch must subscribe one copy of Journal for each unit of 5 of its members and pay the subscription for the Journal in addition to one rupee.

Arrived Coconada on 19th November, Col. Bhola Nauth was met by the District Medical Officer, Capt. Macmillan and his staff. After Col. Bhola Nauth's address they decided to form a branch.

Rajmundry. An address was presented to Col. Bhola Nauth. He addressed a meeting at which both private practitioners and Government medical officers took part. They decided to form a branch.

Ellore. Addressed a meeting—both service men and non-service men were present—they decided to form a branch. The D. M. O. presided.

Muslipatam. A tea party was given. Col. Bhola Nauth addressed a meeting attended by officials and non-officials. They decided to combine the District Medical Association and the private practitioners association to form a branch. The official element seems to be suspicious.

Bezwada. Col. Bhola Nauth addressed a meeting, they decided to form a branch. Tenelly, Guntum and Nellore were also visited.

Arrived Madras on the 30th November and met by Dr. Rama Rau and other prominent medical representatives. Col. Bhola Nauth saw Col. Pandalai and Col. Mahadevan in the General Hospital and enlisted their sympathy. It was resolved after his address that a branch of the I. M. A. should be formed at Madras. 51 names were enrolled on the spot.

Col. Bhola Nauth then visited Tanjore, Trichinopoly, Chettinad, Madura, Tinnavally, Trivendrum, Cochin, Shornpur, Mangalore, Podnur, Coimbatore, Salem and Hyderabad.

It is reported that they have decided to form a branch of the I. M. A. or affiliate the local association at each of these places. At Hyderabad where we have already a branch a larger membership has been ensured as a result of Col. Bhola Nauth's visit.

[We expect to publish the details of Col. Bhola Nauth's tour in the next issue.—Ed.]

MEDICAL NOTES AND NEWS

VOLUNTARY MEDICAL FORCE

Colonel L. V. Thurston, D.S.O., V.H.S., Controller of Voluntary Aid Detachments,, Bengal and Assistant Commissioner of the St. John Ambulance Brigade Overseas, District II, in his capacity as Assistant Director of Medical Services, Assam and Bengal Presidency Division, early in November, inspected the Calcutta unit of the Voluntary Aid Detachment formed under military auspices in India, the members of which are drawn from the St. John Ambulance Brigade Nursing Division, District II, Bengal.

This was a unique occasion, and it is hoped that with the creation of a Voluntary Aid Detachment of Calcutta, other parts of India will follow suit.

The duties of the members of Voluntary Aid Detachments are to assist the Military Medical Services in times of war, so as to free the regular personnel of both the Military Medical and the Queen Alexandra's Nursing Services for war duties.

Colonel Thurston, addressed the detachment after their inspection and examination, both in First Aid and home nursing.

He stressed the necessity of the members keeping themselves thoroughly acquainted with their duties so that they could take over the work allotted to them as members of the Voluntary Aid Detachment and impart instruction to those under them.

U. P. MEDICAL COUNCIL ON POISONS ACT AMENDMENT

A meeting of the United Provinces Medical Council was held at Lucknow on 26th November last with Colonel Buckley, Inspector-General of Civil Hospitals, in the chair.

After transacting some formal business, the Council took up the consideration of the resolution recommending to the U. P. Government to rescind the Poisons Amendment Rules.

The resolution which was passed unanimously, ran:—" The United Provinces Medical Council recommends to the Government to be pleased to rescind amendment No. 1 to the rules framed under section 2 of the Poisons Act and published in the United Provinces Gazette vide Judicial (Criminal) Department No. 1273/VI—1776—1930 dated September 29, 1933 and No. 1000/VI 1776—1930, dated April 15, 1935, because the said amendment adversely affects qualified medical practitioners in the exercise of their profession and is contrary to the provisions of section (1) of the said Act which specifically exempt medical practitioners from any rule made under the Act."

Notices of this resolution had been given by about half a dozen elected members of the Council.

Another important resolution affecting the medical profession and moved by Rai Sahib Dr. Ram Narain Lal was also carried unanimously to the effect " That a Sub-Committee of five members of the United Provinces Medical Council be appointed (1) to revise United Provinces Medical Act on the lines of the British Medical Act by suggesting amendments and providing in the preamble for dealing with all matters affecting registered medical practitioners professionally, (2) to suggest amendments to the code of medical ethics in consonance with the provisions of the Medical Act under Indian conditions, (3) to provide increased representation of independent practitioners and of licentiates according to their strength of the register."

In pursuance of this resolution the following Committee was formed:—Colonel Townsend (Lucknow), Convener, Rai Bahadur Dr. B. N. Vyas (Lucknow), Rai Sahib Dr. Ram Narain Lal, Dr. Kunj Behari Lal Varma (Meerut), Captain R. N. Bose (Meerut).

STANDARD OF TRAINING OF NURSES

Colonel N. M. Wilson, Inspector-General of Civil Hospitals, Central Provinces, opened the annual Conference of the Indian Trained Nurses Association on November 13 last in the Y. W. C. A. hall, Nagpur.

In his speech Col. Wilson said that the raising of the standard of training and the bringing about of a more uniform system of education, examination and certification for trained nurses, both European and

Indian, were two points on which he would like to dwell.

He suggested that, firstly, to raise the standard of training, universal registration was necessary. Registration demanded English as the medium in which the examination must be taken. This standard of qualification could be best paraphrased by a high standard of qualification universally recognized through a Government Act. He could conceive of educated Indian girls being very efficient as nurses but who did not wish to learn English.

He was in favour of having inspectresses in order to obtain this higher standard. An inspectress could act as a license officer between the nursing school and the Medical Examination Board.

Another important factor was the question of the housing of Indian nurses, remarked Col. Wilson. Inspectresses could aid them in this respect and could form a body of opinion in pressing this dire necessity on the local Government.

Concluding, Col. Wilson suggested that the deliberations of the conference should be communicated to the Director-General of Indian Medical Services and other provincial heads of medical departments, as this move would greatly help medical officers in furthering their mutual aims.

Miss Alram, the President of the Conference, observed that nursing in many districts was almost non-existent, and even in hospitals the ratio of nurses to patients was very small. She complained that in making grants to hospitals, nursing was generally the last one to be thought of.

In presenting the annual report, Miss Diana Hartley referred to the "injustice" done to the nurses of Bengal by the Government who had so long delayed to bring their Act into force.

FIRST INDIAN POPULATIONS CONFERENCE

It has been decided to hold the first Indian Population Conference on January 27 and 28, with Sir U. N. Brahmachari as General President, under the auspices of the Institution of Population Research, India, which was organised in February last. Dr. Radha Kamal Mukherjee, Head of the Department of Economics and Sociology, Lucknow University, is the Convenor of the conference.

The conference will devote itself to a discussion of the problems of Social Biology, Hygiene, Vital Statistics, Nutrition, Production and Population trends in the different provinces on which the Institute has been inviting papers and research work. Letters of invitation have been sent to various universities and governments and a good attendance of economists, statisticians, anthropologists and medical men is expected. Persons interested in the organisation of population research and policy in the country are also being invited to contribute to the discussions.

A strong local Reception Committee has been formed with Dr. R. P. Paranjpye as Chairman.

SALVATION ARMY'S HOSPITAL AT GUNTUR

A tribute to the work of the Salvation Army was paid by Lord Erskine in opening their hospital for women and children at Nidubrolu on November 29 last.

In requesting His Excellency to open the hospital, Col. Herbert Coleridge, the Territorial Commander, gave a brief history of the project and said that this hospital, with three other similar institutions working in the district, would benefit women and children without distinction of caste or creed.

Col. Coleridge said that the whole project excluding X-Ray and ambulance, would cost Rupees 1,40,000 of which Rupees 1,00,000 was donated by their international headquarters in London.

NEW BURMA HOSPITAL

For the construction of a new hospital at the Yenangyaung oil field centre the Burmah Oil Company has contributed Rs. 51,000 out of the Rs. 73,000 required.

INDIAN DEPUTY MAYOR OF FINSBURY

The honour of being the first Indian to be elected Deputy Mayor of an English borough has fallen to Dr. C. L. Katial, who came to England some ten years ago from the Punjab. Dr. Katial has been elected Deputy Mayor of Finsbury, an important London borough, with a population of about 70,000.

Dr. Katial, who, is a physician and surgeon with an address in Harley Street, has taken a keen interest in public affairs, particularly on the health side, ever since he came to London.

Before coming to Finsbury about three years ago he did much to help the poor in the east end of

London. In Finsbury his interest has extended to municipal affairs and a year ago he was returned to the local council as a representative of Labour. Particularly concerned with the treatment of tuberculosis, Dr. Katial has played an important part in the re-organizaton of the local health department.

"At the moment," he said, "I am putting through a scheme to provide a modern health centre for Finsbury embodying all the latest scientific principles."

Dr. Katial is a member of the London Panel Committee, medical officer to the London Co-operative Society, and a member of the Executive of the Medical Practitioners' Union. He was formerly a captain in the Indian Medical Service, and for five years was attached to the Royal Air Force in Baghdad—*Statesman*.

CENTRAL ADVISORY BOARD OF EDUCATION IN INDIA

A complete list of members constituting the Central Advisory Board of Education in India has been published as follows:—

Ex-officio Sir Girjashanker Bajpai, member in charge of the Department of Education, Health and Lands, Chairman and Sir George Anderson, Educational Commissioner with the Government of India.

Nominated by Government of India—Sir T. B. Sapru, Sir Akabar Hydary, Dr. A. H. Mackenzie, the Right Rev. G. D. Barne, Lady Grigg and Rajkumari Amrit Kaur.

Elected by the Council of State—Sir K. Ramunni Menon.

Elected by Legislative Assembly—Dr. Ziauddin Ahmed and Dr. Bhagwandas.

Nominated by Inter-University Board—Shymaprasad Mookerjee, Vice-Chancellor, Calcutta University, Sir Radhakrishnan, Vice-Chancellor, Andhra University and Dr. R. P. Paranjpye, Vice Chancellor, Lucknow University.

Representatives of local Governments, either the Minister of Education or his deputy or the Director of Public Instruction or his deputy, the Director of Public Instruction, Madras; the Director of Public Instruction, Bombay; the Minister in charge of Education in Bengal; Sir Jwalaprasad Srivastava, Minister of Education, U. P.; the Director of Public Instruction in the Punjab; Dr. B. A. Maw, Minister of Education in Burma; the Minister of Education in Bihar and Orissa; Mr. B. G. Khaparde, Minister of Education, Central Provinces; the Director of Public Instruction, Assam and the Director of Public Instruction in the North-West Frontier Province.

TUBERCULOSIS HOSPITAL FOR DELHI

The Silver Jubilee Tuberculosis Hospital was formally opened at Delhi on November 19 last by Mr. J. N. G. Johnson, Chief Commissioner of Delhi.

The hospital, which is located in a spacious building on Kingsway, far from the city, has cost Rs. 4,00,000. It is equipped with X-ray apparatus, a cooling system and latest devices. The building stands on 64 acres of land and will accommodate 70 patients. Already 24 patients have been admitted.

Mr. Johnson paid a tribute to Sir Guthrie Russell, Chief Commissioner of Railways, who had helped in negotiating with the North-Western Railway authorities in regard to the acquisition of the hospital site.

Hafiz Abdul Aziz, Junior Vice-President of the Delhi Municipality, in asking Mr. Johnson to open the hospital, related the efforts made by the municipality to establish a tuberculosis hospital and clinic, the demand for which was increasing every day.

TESTING OF DRUGS IN INDIA

Arising out of a debate in the Council of State, the Government of India have addressed the local Governments on the need for giving effect to certain recommendations of the Drugs Inquiry Committee.

Though most of the matters lie within the provincial sphere, the Government of India have intimated their willingness to give a lead by establishing a biochemical laboratory, preferably in Calcutta, for the testing of drugs. It is hoped that the Provincial Governments will follow this lead, establish their own laboratories and create an inspectorate to keep a watch over the sale of drugs.

MEDICAL RESEARCH IN INDIA REVIEWED

Some aspects of the work of the Conference of Medical Research Workers in India, who met in Calcutta, were described at the Calcutta Rotary Club by Lt.-Col. G. G. Jolly, Officiating Public Health Commissioner with the Government of India.

"Less than 70 years ago," he said, "the Government of India appointed two medical men, Drs.

Lewis and Cunningham, as special assistants to the Sanitary Commissioner with the Government of India, for the purpose of utilizing scientific invetigations for the benefit of public health. The great need at that time was the initiation of scientific investigation into disease problems, particularly with the aid of the then new but rapidly developing methods of bacteriology.

" Both these officers were research workers, and both achieved distinction as such. Lewis was a pioneer in parasitology who made important discoveries in connexion with the parasite cause of elephantiasis and the group of blood parasites known as the trypansomes, members of which cause sleeping sickness in man and "surra" in horses. Cunningham, 10 years after his appointment under the Sanitary Commissioner, was given the Chair of Physiology in this town and held it for 18 years during which he managed a small laboratory, the only one of its kind in India.

"The date 1869, then, marks the beginning of a period of active development of medical research in India. In the decades that followed, progress has been rapid and laboratories and institutions for research have been built in many parts of India.

" In 1896, on the introduction of plague at Bombay, the bacteriologist, Haffkine, transferred from Bengal, where he had been engaged on anti-cholera inoculation work, opened in temporary quarters his first plague laboratory which after various moves was finally located on a larger scale in old Government House, Parel, where the Haffkine Institute remains as his memorial and still produces for India the plague vaccine which he first created.

" The Pasteur Institute of India was founded at Kasauli in 1900, a similar Institute at Coonoor in 1903. The King Institute of Preventive Medicine at Guindy, Madras, was opened in 1904 and the Central Research Institute, Kasauli, in 1906.

" In 1916, Burma opened its Pasteur Institute in Rangoon, and Assam followed with a similar one at Shillong in 1917.

" The opening of the Calcutta School of Tropical Medicine in 1920 and the notable part played in its foundation by two illustrious Calcutta doctors, Pardey Lukis and Leonard Rogers, will be recalled by some here to-day, while most of you will remember well its distinguished first Director, Sir John Megaw, who like Sir Leonard Rogers still takes the deepest interest in its fortunes. Last, I must mention the All-India Institute of Hygiene and Public Health, like the Tropical School a combined teaching and research institute, but whose foundation we owe to a Trust which has probably done more for human welfare throughout the world than any similar body—the Rockfeller Foundation.

" I come now to two events of much importance to the organization of medical research in India. The first was the creation in 1906 of a Bacteriological Department under the Government of India. Not all research workers came into this Department but the officers employed in the various Government laboratories throughout India, in which medical research was carried out, were linked together in a cadre and given improved conditions. With minor modifications this Bacteriological Department persists though its name has been changed to Medical Research Department and from it the various Government research laboratories whether central or provincial are staffed.

" The second important event was the constitution in 1911 of an organization for research known as the Indian Research Fund Association and it is interesting to note that its creation preceded that of the Medical Research Council in England which only came into being during the Great War. The formation of the Indian Research Fund Association was largely due to the vision and administrative ability of a distinguished servant of India, Sir Harcourt Butler. Its original objects were the encouragement of medical research by financing approved inquiries and the supply of suitable research workers. The rules of the Association do not restrict us to any special lines of medical research except that it is laid down that reearch into communicable disease should specially be carried out and in practice the funds of the Association have been largely devoted to investigations into the major endemic and epidemic diseases of India.

" This conference is one of experts—actual workers on medical research problems drawn from all over India—and also medical officers of health.

" Malaria, the most important disease endemic in India, occupies a prominent place in our programme, and investigations into it are organized under the Malaria Survey of India, financed by the Indian Research Fund Association and based on Kasauli.

" Cholera is a disease whose home is India, and the world looks to us for the solution of its problems. An attack on these problems has been organized and many lines of work are being pursued at Kasauli, here in Bengal, and in Assam. Much is hoped for from the team-work now in progress and results so far are encouraging.

" In plague, research is being pursued in Bombay into the preparation of a potent anti-plague serum for treatment, and on improvements in the efficacy of the famous preventive vaccine of Haffkine. An important epidemiological inquiry is also in progress in the Cumbum Valley of Madras Presidency.

" Rabies research includes improvement of the vaccines now in use both for men and animals and statistical analysis of the results of treatment throughout India.

" In leprosy, attempts are being made to cultivate outside the body the causation germ of the disease, while a study of rat leprosy is in progress. Improved methods of treatment are constantly being sought and tried out.

" Outside the scope of the special Committees we have many inquiries. Under " Nutrition " we have in progress a systematic survey of Indian foodstuffs and an inquiry on cheap balanced diets, also investigations into the causation of stone in the bladder and into vitamin deficiency; while field observations have been made with the object of obtaining data, of the standard of physique in relation to diet and the incidence of food deficiency diseases.

" Investigations proceed into the action of various drugs, indigenous and others, into drug-addiction, into typhus fever, snake venoms, epidemic dropsy, cancer, tuberculosis, anæmia of women, worm diseases, fungus diseases, cirrhosis of the liver, cataract and, I am glad to say, that scourge of India, the contagious eye disease " Trachoma."

POST-GRADUATE COURSE FOR TUBERCULOSIS STUDY

Twenty-five candidates have been selected from the various Provinces and Indian States for a course of post-graduate study in tuberculosis to be held in Calcutta early this year under the auspices of the King George Thanks-giving (Anti-Tuberculosis) fund. There were 77 applications. Five candidates have been selected for the reserve list.

NEED OF LEPER ASYLUM IN EAST KANDESH DISTRICT

That there are nearly thirty thousand lepers in the East Kandesh District, particularly in Yawal and Rawer Talukas was the revelation made by Mr. D. G. Hale, a social worker who is working for the establishment of a leper asylum in the East Kandesh District.

The Chalisgaon and Bushawal Municipalities have passed unanimous resolutions demanding the establishment at an early date of a leper asylum in the East Kandesh District.

DONATION FOR THE KURSEONG SANATORIUM FOR TUBERCULAR PATIENTS

At a meeting of the governing body of the Jadavpur Tuberculosis Hospital, Rai Sashi Bhushan Dey Bahadur donated Rs. 50,000 towards the building fund of a sanatorium for tubercular patients at Kurseong.

Rai Bahadur Dey has already made a gift of his house and property for the purpose.

VETERINARY HOSPITAL IN MYSORE

Sir Mirza Ismail, Dewan of Mysore, recently opened a new veterinary hospital at Magadi, about 40 miles from Bangalore. The donor of the building is Mr. Sidde Gowda.

The Dewan took this opportunity to say that though there was no dearth of veterinary hospitals in Mysore, the number was still small in comparison with the cattle population of the State. The Government were in full sympathy with the ideal of multiplying the present facilities for veterinary work until every taluk was provided with a hospital; and, as a matter of fact, they were trying to start more hospitals every year to the extent permitted by the finances. It was a matter of deep satisfaction to him to acknowledge that public co-operation was forthcoming in an increasing measure; and it was by such active and enthusiastic co-operation, that the agriculture of the State could be improved.

MALARIA RESEARCH TOUR TO CENTRAL AFRICA

Sir Malcolm Watson, head of the Ross Institute of Tropical Research, is planning a tour in Central Africa for research work in Malaria.

" Why malarial conditions should appear in uninhabited areas immediately after their disturbance by man is at present a mystery. On my return from my last visit to Africa I emphasised the need for more scientific investigation into what might eventually become a simple method of controlling malaria, using nature to help, and our desire is to provide that investigation."

BILL FOR PAINLESS DEATHS

Every loyal subject of His Majesty's Government in the British Isles will have the "Right to Die" for the first time as a result of a bill to be shortly introduced in the House of Lords.

Lord Moynihan, the surgeon, will introduce it with the backing of an influential body of medical and churchmen who are organizing themselves into the "Voluntary Euthanasia Legalisation Society."

"We are asking for the 'right to die' and not the 'right to kill,' say the sponsors. "We are asking that persons afflicted with incurable diseases shall be allowed to choose between a quick, painless death and a lingering on."

Leaders of the church are issuing an "ethical statement" to prove that the proposals of voluntary death are not contrary to Christian principles.

The sponsors also protest that the bill won't encourage suicide.

RED CROSS PLANS FOR ABYSSINIA

International Red Cross plans for Ethiopian relief are developing rapidly. Immediately following the opening of hostilities, the International Red Cross Committee of Geneva telegraphed to the Italian Red Cross and to the newly-formed Ethiopian Red Cross, inquiring whether they wished for assistance from other national Red Cross Societies. The Italian Red Cross replied that, while it appreciated the offer, the resources at its disposal are sufficient to enable it to meet all eventualities in East Africa. The Ethiopian Red Cross, on the other hand, indicated that it would be grateful for ambulance æroplanes, fully equipped mobile ambulance units with personnel, drugs, ambulance material and funds. The amount enquired in cash is estimated by the Ethiopian Red Cross at £10,000 a month.

This information was at once transmitted by the International Red Cross Committee to the sixty-one national Red Cross Societies of the other countries of the world, and to the secretariat of the League of Red Cross Societies in Paris. M. Max Huber, President of the International Committee, and his colleagues, have arranged for Mr. Sidney Brown of the Committee's Secretariat, and Dr. Marcel Junod, a Swiss Surgeon, to leave for Addis Ababa so that the Committee which has extensive responsibilities in all matters relating to the Geneva Convention and questions of neutrality arising in connection with relief work in the war area, may have a permanent representative in Ethiopia.

A number of national Red Cross Societies are already well forward with their plans for meeting the Ethiopian Red Cross request for assistance, namely, the American, Belgian, British, Dutch, Greek, Norwegian, Spanish, Swiss and Swedish Societies.

The Ethiopian Red Cross has intimated the desire that Red Cross Societies sending personnel to the Ethiopian Red Cross should include no women.

The Indian Red Cross Society, as previously notified is prevented by Act XV of 1920 from spending its funds out of India, but it has announced its willingness to receive in behalf of the Ethiopian Red Cross gifts of drugs and medical stores or cash with which to purchase them.

Prince Bibesco, President of the International Air Federation, has been in Conference with the representatives of the International Red Cross as to the contribution which private airmen might make in air ambulance work in connection with the campaign in Africa. The Red Cross, in accordance with its tradition of impartiality and disinterestedness, has offered assistance to both sides. The Italian Red Cross Society, however, has announced that it is equipped to meet all requirements. The Ethiopian Red Cross, on the other hand, has asked for assistance from abroad, and particularly for ambulance æroplanes.

Prince Bibesco has communicated to all the national Aero Clubs affiliated to the International Air Federation, for their information, a statement regarding the relief operations already being carried out, and data relating to the role which might be assumed by private airmen, with special emphasis on the service they could render in transporting personnel and medical stores..—*A. P.*

ACKNOWLEDGMENTS

Added to the List of Exchange

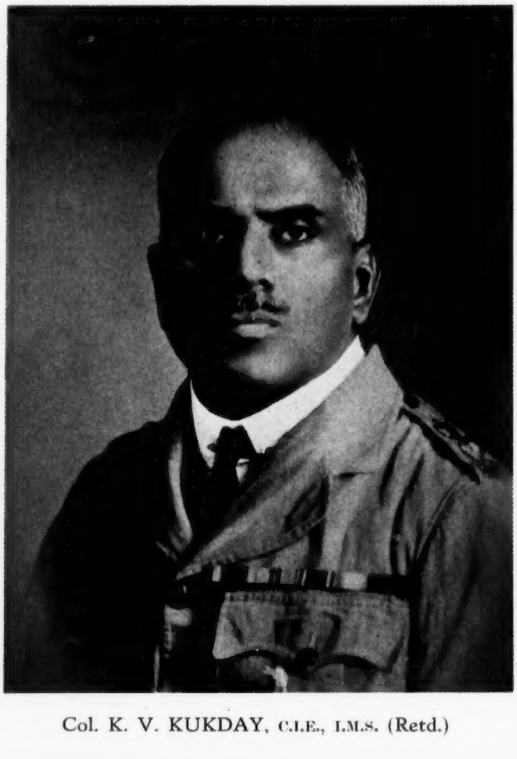
1. Population—In the English language.

Received for Review

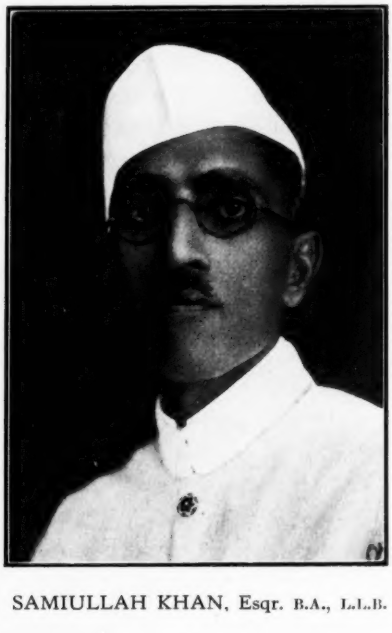
1. Bacteriology in Relation to Clinical Medicine —By M. N. De and K. D. Chatterjee.

Col. BHOLA NAUTH, C.I.E., I.M.S.(Retd.)

Dr. U. RAMA RAU, Rao Sahib



Col. K. V. KUKDAY, C.I.E., I.M.S. (Retd.)



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